University News

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PARIMAL MANDKE

Technology Management is Everybody's Business

J.S. RAJPUT

Science Teaching for the 21st Century
— A Big Leap or a Pedestrian Crawl

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Networking of Libraries in India

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— A Study of David Williams's *The River Horsemen*

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Higher Education and Development
— Convocation Address

UNIVERSITY ADMINISTRATORS MEET
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Association of Indian Universities

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Vidya Kulkarni
HEAD

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Dr. S.T. Sawant
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Maharashtra Institute of Labour Studies,
(Government of Maharashtra),
Dadabhai Chamarbaugwala Road,
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(Tel. Nos. 4135332/4133798, Fax No.4133035)

and send five copies of each book (not returnable) for adjudging the best one by the Panel of Experts, so as to reach by 31st January 1997.

For further inquiries write to or contact Dr. S.T. Sawant, Convener of the Core Committee set up for the purpose.

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Editor :
SUTINDER SINGH

Technology Management is Everybody's Business

Parimal Mandke*

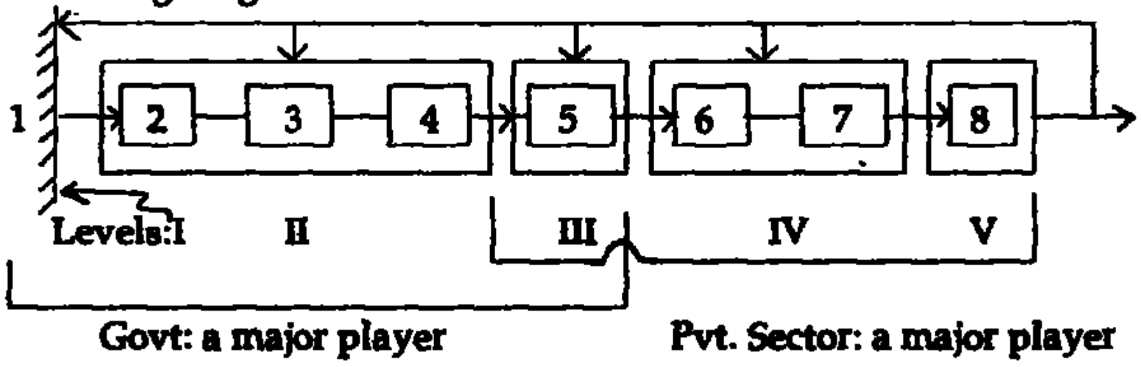
The theme for Engineers Day this year was Technology Management. The relevance of this theme in today's situation cannot be overstated. Historians, sociologists, and economists recognized "technology" as a variable long before managers saw "technology" as a strategic resource. Numerous studies carried out on US economy between 1940-1970 established that the growth of economy could not be explained in terms of traditional inputs like labour and capital. The role played by technology as the third input, hitherto unaccounted in economic analysis, had to be acknowledged. It was only natural for managers to take the clue from economists. It was important for corporations to 'manage with technology' in order to remain ahead of competition. Technology management as an area of study has largely grown out of this need of business to use technology as a strategic resource.

The other side of technology management is management of technology itself. That is to say, how to manage technology through its lifecycle of generation, application, diffusion, adaptation and obsolescence.

In reality, the distinction between "managing with technology" and "management of technology" is often blurred. One has to be at the cutting edge of technology, if technology is to be used as a strategic resource. In such case, unless one is also involved in "management of technology", it is never possible to use technology as a strategic resource.

Autonomous nature of technology causes another camouflage. The distinction between technology as a mere means to achieve the goal and the goal itself is completely blurred by the autonomous character of technology. Thus, managing a goal is inseparably coupled with managing technology. Eradication of illiteracy, for example, is equally an issue of technology management as much it is a social issue and objective.

Total view of technology management may be obtained in the following diagram :



Legend :
1. Policy Framework
2. Research
3. Design
4. Development
5. Decision
6. Implementation
7. Production
8. End-user

**Principal Educational Consultant, NIIT Ltd., New Delhi-110 019.*

Level I	Policy framework
Level II	Generation of technology
Level III	Transfer of technology
Level IV	Production of technology
Level V	Distribution or Consumption of technology

Management of technology is to be done at all the five levels, as indicated in the diagram. Management of technology at the five levels, briefly involves the following :

Level I — Policy framework

- — It has two aspects. Policy for technology and technology component of other policies.
- — Basic decisions of the Government about how technology is proposed to be deployed to achieve the socio-economic goals.

Level II — Generation of technology

- — In itself, this is a separate area called R&D Management
- — Major players are R&D institutions and higher education institutions.
- — Government is the main provider of funds.
- — Conceptually, the management tasks are : Management of discovery, management of invention, and management of innovation.
- — Involves management of creativity.
- — Techniques Used : Various applied mathematics techniques are used for planning forecasting, monitoring and evaluation purposes.

Level III — Transfer of Technology

- — It is the commercialisation of prototype technology developed at the laboratory level. This process is called 'vertical' transfer as against 'horizontal' transfer in which technology finds a new application, originally not perceived.
- — Non technological factors, such as, market acceptance, Government policies, organisation strategies, financial implications and statutory/legal aspects play a crucial role in decision making.
- — Conceptually, the management task is that of diffusion.
- — Every application of technology requires intelligent adaptation.
- — Government agencies like NRDC, for example, fully engaged in acting as a facilitator between the donor and recipient of technology.

Level IV — Production of technology

- — This is the domain of the organisation or firm.
- — Hitech organisations are continuously adapting new technology. They are actually managing the technology itself and also managing with technology.
- — They use the techniques of forecasting and assessment to take decisions at the firm level.

Level V — Consumption of Technology

- — With hitech, consumption of technology require a far greater management. This refers to post sales service and education and training of the end user in operating and maintaining the technology.

In the above framework, every economic activity requires management of technology at one or more levels. In India, the government participates basically through levels I, II and III while the private sector concentrates more at levels III and IV. The fifth level is only beginning to receive attention after the multinationals have entered Indian market. Further, the management of interfaces between levels has been weak.

Seen in this perspective, technology management is a continuous responsibility. As Sam Pitroda has described, the task of technology management relates to institution building for research, development, education, training, testing, legal matters and many other related activities, thus involving one and all. The courses on technology management which have come into existence are mainly in the business schools and cater to the limited domain of training business managers in the strategic deployment of technology in a corporate environment. The curriculum thrust is on "managing" technological innovation at level of a firm. It does not undertake to provide conceptual understanding of 'technology' as such. This needs to be reviewed. It is believed that with such an understanding of technology, management of technology will be more informed.

In addition to the task of training professional managers in management of technology, there is a need to teach conceptual foundations of technology as a part of the core curriculum of first degree. Technology has been extensively studied from historic, philosophical, sociological, economic and scientific points of views. An exposure encompassing these dimensions of technology would transform the attitude towards technology as a liberating and empowering force. University curricula have not felt it necessary to impart a conceptual education on technology and for that matter even on science to all first degree students, as much they have recognised the need to give basic knowledge of economics and management. It is time that we address this need.

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Review Article

Science Teaching for the 21st Century
A Big Leap or a Pedestrian Crawl

J.S. Rajput*

Context

The Indian civilisation is known for its insistence on the full flowering of spirit in all spheres of life. This has been so over the last four thousand years. Awareness of beauty and the need to establish harmony with nature are the well known manifestations of the growth of Indian civilisation. All along, the principle of universal brotherhood and affirmation of love for all living beings have been a distinguishing feature. A rational, logical and scientific approach has been the guiding factor. The basic principles of science have found a place in efforts of the individuals and the societies. Creativity, initiative and exploration have been the hallmark of the indigenous, scientific method developed in India. The scientific method is so comprehensive that it includes imagination, reason and applies these in the areas of creative ventures, innovations and efforts. Gokak (1994) finds this as 'understandable but not adequate' and adds that 'if lasting results are to be achieved, love or intuition, which really is the soul-gaze of man has to lead them to the desired transformation' (*India and World Culture*, Sahitya Academy, New Delhi, 1994) 'Awareness of beauty', 'the brotherhood of man through the affirmation of love' and 'harmony with nature' are essential for humanism and socialism to thrive' according to Dr. Mulk Raj Anand. Such efforts, all along have resulted into better understanding and appreciation of the nature and whatever is happening around. Researches, explorations and innovations in science are as critical and essential today as these were at any point of time in the past.

Discoveries, inventions, laws and theories are terms linked to growth and development of science and society. S. Chandrasekhar (1991), the Nobel Laureate in Physics is very clear and explicit about his perceptions of what motivates the scientists' work. According to him, substance and reality come to the efforts of a scientist from his desire to participate actively in the progress of his science to the best of his abiliity (*Truth and Beauty; Aesthetics and Motivations in Science*. Viking, Penguin Books India, New Delhi, 1991). He elaborates it further.

"And if I have to describe in one word what is the prime motive which underlies a scientist's work, I would say systematization. That may sound rather prosaic, but I think it approaches the truth. What a scientist tries to do essentially is to select a certain domain, a certain aspect, or a certain detail, and see if that takes its appropriate place in a general scheme which has form and coherence; and, if not, to seek further information which would help him to do that. This is perhaps somewhat vague, particularly, the use of the words 'appropriate', 'general scheme', 'form', and 'coherence'. I admit that these are things which cannot be defined any more than beauty in art can be defined; but people who are acquainted with the subject have no difficulty in recognizing or appropriating it".

To clarify this point further, Chandrasekhar reproduces a quotation from Rutherford :

"It is not in the nature of things for any one man to make a sudden, violent discovery; science goes step by step and every man depends on the work of his predecessors. When you hear of a sudden unexpected discovery — a bolt from the blue, as it were — you can always be sure that it has grown up by the influence of one man on another, and it is the mutual influence which makes the enormous possibility of scientific advance. Scientists are not dependent on the ideas of a single man, but on the combined wisdom of thousands of men, all thinking of the same problem and each doing his little bit to add to the great structure of knowledge which is gradually being erected."

**Chairman, National Council for Teacher Education, 16 Mahatma Gandhi Marg, IP Estate, New Delhi-110002.*

The Way Science is Taught

At the present juncture, science and technology have become household terms. It has been discussed on umpteen occasions how these have transformed the quality of life, and also the approach and attitude to life. It has been well analysed how these have created perceptible impact on social structures, economic endeavours and cultural pursuits. The present debate is: how the 21st century would assimilate science and technology, what would be the pace of the changes in human endeavours because of developments in science and technology and their consequential impact on the social, cultural and economic scenario. Hopefully, in the 21st century, elementary education would be universalised even in countries like India which are at present lagging far behind. It is also a universal phenomenon that education systems everywhere are not only trying to universalise elementary education but are simultaneously attempting the universalisation of science education as well. The immediate pragmatic question would be to assess what is being done in schools on this front. Those who understand it would certainly like to foresee the probable scenario in the 21st century and also the shape of science teaching and learning in schools. This would definitely have close relationship with what is being done in schools today and what are the changes taking place in the society in significant areas of human activities. Understanding of the demands of community from science education and how the education systems and the schools could respond to these by providing a realistic, forward looking and relevant learning of science, would remain of interest in future years as well.

The Education Commission (1964-66), popularly known as Kothari Commission, for the first time recommended learning of science by all children during first ten years in schools. Earlier girls had the option of not learning science at all. The boys were also not required to learn science beyond the upper primary or even primary stage of school education. This recommendation of the Kothari Commission was a major breakthrough. It required large number of science and mathematics teachers in schools, who were not available readily. Those in service were not professionally prepared to handle the new challenges. The implementation of 10+2 pattern of education initially resulted into serious confusion in education systems of the States/UTs which were not prepared to provide suitably trained teachers, equipments and laboratories to meet the objectives of the policy which was implemented as a consequence of the recommendations of the Kothari Commission. Over the years, situation has improved but it would be difficult to say that quality of science teaching and learning has also improved. There have been several positive changes; new curricula have been developed; use of education technology has been encouraged and new communication technologies are being used. However, a longer list can be made of things not being done in schools and institutions to strengthen teaching and learning of science. The implementation is weak, infrastructures are inadequate and the curricula are not always indigenous. The race for vertical mobility still dominates the psyche' of Indian parents and children who are keen to join the medical or engineering profession. Learning science for life almost stands ignored. In each class science is learnt to prepare for the next higher class — even today. The critical issue is — how do our children learn science, and, how our teachers teach science? Who could provide an answer to this other than someone who has been a teacher, educator, researcher in science education and an individual with a life long commitment and devotion to science in schools. Narendra Vaidya is one such individual. His latest book *Science Teaching For The 21st Century* (Deep and Deep Publications, New Delhi, Pp. 503, Rs. 600/-) attempts to provide answers to many of the queries and questions that arise in science.

Why This Book

Narendra Vaidya has toiled for more than three decades as a researcher in the field of science education. His researches, research papers and books have received wide acclaim outside India. This is not unusual. Recognition always takes a very interesting route; it always travels back to India from abroad. Vaidya, however, ramained unperturbed and continued his efforts single handed for most of these years. A book from him at this stage should raise high expectations. As a practitioner in science education, a well known educationist and researcher with a flair to plough back the outcomes of his researches to the classrooms, Vaidya is most suited to write a volume which is comprehensive in nature and projects a vision for the future. The aims and objectives of the book are timely and provide all that someone would like to be included in a treatise on science education in schools.

The author would like to present this volume to 'serve as a basic methods text for those who wish to specialise in teaching of science'. He has, however, included materials at higher levels and much beyond the prescribed requirements of training systems. It would, however, be difficult to find readers, either teacher trainees or teacher educators, who would be voluntarily willing to put in extra efforts. After all, all our education systems in actual practice aim at preparation for the final examinations alone. Consequently, the materials which are preferred are those prepared with an eye on the terminal examinations. The other objective which attempts to pick up current issues in science education and examines these in an open ended manner has been, to a great extent, achieved by the author. In this process, the questions of content and pedagogy and content-cum-methods become very important. The author, himself a content specialist as well as a seasoned method master has attempted to present the material that would interest both the subject specialists and the method masters. In India, the issue of content-cum-methodology has unfortunately not been resolved as yet and the debate continues. The well-known experiment of 4 year integrated courses in science education, launched in mid-60s in the four regional colleges of education has remained experimental even after more than three decades. The superiority of these programmes stands well established. However, there has been no concerted effort to multiply the integrated teacher education programmes in other institutions.

The Approach

One of the objectives highlighted concerns the very approach to science teaching. The author would like it to be approached conceptually rather than factually. It is debatable whether we are really preparing our teachers on these lines. Not many teachers who guide activities and experiments in the 'classrooms' are aware of the fact that these must reflect the nature and spirit of science. Probably a total transformation of teacher preparation programmes and the present approach to teaching and learning of science would be essential. The issue of optimum utilisation of resources in science education and mobilisation of local resource is critical and has been dealt with appropriately in the volume. There are a large number of open ended ideas which could be utilised in teaching as well as towards the understanding of the basics of science.

One of the major objectives of such an effort would obviously be to ensure higher learner achievements in science. While going through various chapters this concern could be visibly identified at several places. Some of the factors affecting attainments are rather known. The author has quoted W.J. Jacobson and Rodney Doran on this aspect (p. 410). Their list includes early learner specialisation, strong background in physical science and mathematics, relationship between home and school, positive attitude towards science and the study of science. These are correlated with achievements in science. Not much extra effort is required to nurture positive attitudes in home and in-and-outside the school.

Possibilities

How could science education be really improved in our schools? Some of the components identified by the author (p. 459) are: better adaptation of teaching-learning to individual needs; encouragement of students towards acceptance of responsibility for learning; increased opportunity for cooperative work by students for own improvement; more emphasis on question answering and problem solving; greater satisfaction of learning by students, a sense of self-attainment by the students as active partners in the game; and increased possibilities for experiencing the joys of teaching and learning. The question posed is — why is this not actually happening in schools?

In the context of teachers, the author has identified certain 'impact nuclei' (p. 460), which include; Stress on productive thinking and creativity, focus on discovery, children's science, scientific literacy, motivation, community resources in science teaching, research in science education (action research). In addition, others like science clubs, science museums, aquarium, home-made apparatus, teachers' own professional growth, resource materials would of course be included. These components have been very elaborately dealt with in the book and provide an interesting and enjoyable chapter. It may, however, be worthwhile to mention that the chapter on elementary and secondary laboratories and classrooms is probably deficient in the context of preparing for 21st century and universalisation of science education. This is particularly relevant for countries like India where the number of learners is a major issue. Those in remote and far-flung areas are still not within the ambit of basic education and resources, both material as well as human, are in short supply. It is not easy to perceive availability of good buildings, good laboratories and items like working computers, VCRs and TVs in every school and every region, though it would be indeed desirable at the earliest. Stark realities do dampen enthusiasm on many occasions.

A close perusal of the volume highlights several issues which would be faced by the teachers and learners of science in near future. The issues of training teachers of science, relevance of curriculum of science and resource mobilisation would remain prominent before the planners and implementors. This book must not only find a place in the library of each school and college but should also be read thoroughly by every science teacher and science teacher-educator. It is one volume which needs to be read by those who take policy decisions on science in ministries and departments and also by those who plan implementation of policies at national and state levels. Vaidya has done great service to the cause of science education through the present effort which is both comprehensive and elaborate. His scholarship, learning and concern are visible throughout the book. He deserves gratitude from all those who are concerned with science and science education. And who would not be concerned with science in 21st Century.

राष्ट्रीय अध्यापक शिक्षा परिषद्
National Council for Teacher Education
16, I P. Estate, Mahatma Gandhi Marg, New Delhi-110 002

FOR ATTENTION OF CANDIDATES ASPIRING
TO JOIN TEACHER TRAINING COURSE

National Council for Teacher Education (NCTE) has been established by an Act of Parliament with a view to achieving planned and coordinated development of the teacher education system throughout the country as well as for the regulation and proper maintenance of norms and standards in the teacher education system. In pursuance of the objectives of NCTE Act, the following decisions pertaining to teacher training courses have been taken and already published through earlier advertisements of the NCTE

Pre-service Teacher Education for the first Degree/Diploma should be only through face-to-face Institutional Courses of Teacher Education of a minimum of one year duration.

Admission to B.Ed. through correspondance course of 24 months duration is restricted to only those regular teachers serving in recognised schools. (Primary, Secondary and Senior Secondary) within the jurisdiction of the respective Universities with minimum of three years of teaching experience.

NCTE has conveyed the above decisions to the Universities, Boards of Education, State Governments and others concerned. Some of the State Governments and Universities have intimated acceptance/implementation of these decisions However, NCTE advises those desirous of entering teaching profession at the school level and planning to undergo any course or training leading to qualification in teacher education for employment in schools as below :

- Seek admission to full time courses with face to face classroom instruction
- Not to join any course other than face to face full time courses.
- Correspondence/distance education courses are meant for serving teachers only

Minimum qualifications for a person to be employed as a teacher in schools will be in accordance with the guidelines of NCTE. Therefore, anyone obtaining a degree or diploma by pursuing any course in violation of the above decisions of the NCTE runs the risk of the qualification being held invalid for employment.

Further details can be ascertained from any of the nearest Regional Committees of the NCTE listed below :

The Regional Director,
Northern Regional Committee (NCTE)
A-46, Shanti Path, Tilak Nagar,
Jaipur-302 004

The Regional Director,
Southern Regional Committee (NCTE)
66, 6th Main, 4th Block, Rajajinagar,
Bangalore-650 010

The Regional Director,
Eastern Regional Committee (NCTE)
N-2/82, IRC Village, Nayapalli
Bhubaneshwar-751 015.

The Regional Director,
Western Regional Committee (NCTE)
Manas Bhawan, (Near A.I.R.), Shyamla Hills
Bhopal-462 002.

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Networking of Libraries in India
A Critical Review

H.K. Kaul*

Introduction

The necessity of networking libraries in India was strongly felt in the 1980s as the developed countries had advanced a great deal in this field and gained through resource sharing and networking. In July, 1984, the Working Group of the Planning Commission on Libraries and Informatics headed by Dr. N. Seshagiri recommended the need for modernisation of library services and informatics during the Seventh Five Year Plan period, 1985-1990. It also recommended the interlinking of library systems.

In 1985, a meeting was convened by National Information System in Science and Technology (NISSAT) in Calcutta under the chairmanship of the Director-General, CSIR. It discussed the Kamath Committee report (1972) that had recommended the establishment of a science and technology library in Calcutta and the promotion of automation and networking in the city. As such CMC Limited was commissioned by NISSAT to prepare the feasibility report of the Calcutta Library Network (CALIBNET). The report was completed in 1989. In January 1988, India International Centre, New Delhi with the support of NISSAT began the work on Delhi Library Network (DELNET) as a project of the Centre. In July 1992 it was registered as a Society under the Societies Registration Act of 1860.

These developments were not taking place in isolation. The Seventh Five Year Plan had provided for the promotion of library and information services and the introduction of information technology. As such in the Report of the Steering Group on Science, Technology and Environment recommendations were made for the transformation of libraries and library community through the use of computers.

It was advocated that most of the major library operations should be computerised during the Seventh Plan. It was in lieu of these recommendations the Planning Commission set up a Working Group on Modernisation of Library Service and Informatics under the chairmanship of Dr. N Seshagiri.

It recommended the development of a computer network linking all special libraries in India by AD 2000, besides modernisation of libraries with computers, facsimile transmission, video-discs, computer-aided micro-filming and reprographic facilities. This paved the way for the establishment of an Information and Library Network (INFLIBNET). The report of INFLIBNET was published in 1989. In 1991 INFLIBNET opened its office in Ahmedabad. As soon as funds became available under the Eighth Plan, INFLIBNET began its work.

Meanwhile proposals were made for establishing more networks in the cities like Madras, Pune, Bombay and Bangalore. However, besides CALIBNET, DELNET and INFLIBNET the library networks were started in one form or the other in Bombay, Madras, Bangalore, Mysore, Pune and Ahmedabad.

Essentials of Library Networking

Before we look at the achievements of individual networks, it may be in the fitness of things to refer to some of the following basic essentials of a resource sharing library network.

1. Library networking is meant to promote and facilitate sharing of the resources available within a group of libraries in order to provide maximum information to users, to lower operational costs and also to make optimum use of national resources.

2. In order to do so it is necessary to create bibliographic tools like union catalogues and union lists based on the resources available in the participating libraries and these tools have in turn to be used for resource sharing and reference purposes.

3. Rationalisation of acquisitions needs to be undertaken.

4 Inter-library loan services should grow and may be interlinked with the search of the union catalogues. Delivery of documents should be fast, either

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5. The libraries selected to join a network should be willing partners, ready to buy hardware, etc. and should be willing to send professional staff for professional training. They should be willing to pool bibliographic records to the Central Host of the network besides adhering to other network obligations.

6. In-house functions like acquisition, cataloguing, classification, serials control, circulation, selective dissemination of information (SDI), current awareness service, etc should be undertaken by the individual libraries. The network software may or may not support these operations of the libraries in the beginning but eventually the network software should not only be able to create union catalogues or full text databases, etc. but also be integrated with the in-house operations.

7. The network should be able to recommend to participating libraries the type of hardware they need for their in-house functions and for networking purposes. Hardware should be selected considering the number of entries the participating libraries can generate within the next 3-5 years. The hardware at the Central Host will have to be updated regularly depending upon the speed with which participating libraries generate records and the network pools them into the Central Host.

8. All libraries should follow a standard format, cataloguing code, thesaurus, etc. uniformly .

9. Electronic mail and Internet facilities should be established between libraries and they should be able to access international databases preferably individually or through the network host to begin with.

10. Although effort should be made to have one classification scheme in all participating libraries but use of different class numbers should not become a hurdle as search requests are mostly by authors, titles, editors and subject descriptors.

The Networks

CALIBNET

NISSAT has been generous to CALIBNET as it was the first library network visualised and started by NISSAT. At a meeting in 1986 in Calcutta, DSIR initiated action for preparation of a feasibility study for networking about 40 libraries in Calcutta. According to the feasibility study report Rs 233.8 lakh were to be spent during Phase I and Phase II of CALIBNET. NISSAT also contributed to the development of MAITRAYEE software package based on INGRESS 5.2 for CALIBNET. This package was developed through CMC Ltd. and given to CALIBNET. So far there are no details of how much data has been created in machine readable form using MAITRAYEE and how many libraries are using this package.

CALIBNET has not created any union catalogues of books, etc. but is providing access to INTERNET which any institution can have and is offering CD-ROM database searching facility, which again any institution can offer.

CALIBNET as such from 1986 to 1996, has not created any value-added products of its own which could help in resource sharing of Calcutta libraries[1]. Keeping in view its present services, it does not seem to act as a library network because it does not fulfil the basic objectives of a library network. As such NISSAT- CALIBNET tie-up has harmed the modernisation process of libraries in Calcutta.

DELNET

NISSAT had supported DELNET as a project of the India International Centre from 1988 to 1992 and as a registered society from 1992 to March 1995. DELNET has been a low cost network which conformed strictly to the activities of a library network. Some of the salient features are :

1. DELNET has 67 institutional libraries as its members.

2. In order to promote resource sharing among DELNET libraries, DELNET has created :

(a) Union Catalogue of Books (1.68 lakh records)

(b) Union List of Periodicals (116 libraries)

  i) Union list of Science periodicals (7811 records)

  ii) Union list of Social Science periodicals (6919 records)

  iii) Union list of Humanities periodicals (1178 records)

(c) Specialists database (1200 specialists)

(d) Database of Articles (50,000 records)

(e) Union Catalogue of Periodicals (2391 records)

(f) Database of language publications (sample database)[2]

3. DELSIS, the networking software based on BASIS plus which can accommodate and retrieve millions of bibliographic and full text records was developed by DELNET itself.

4. INTERNET E-mail facilities are used by its members and access to INTERNET is also available at DELNET. DELNET has created a Home Page on WWW. It can be accessed on INTERNET at the following address: http://www.nic.in/delnet.

5. Through rationalisation of foreign periodicals DELNET has saved Rs 1 crore of participating libraries in the field of physical sciences, medical sciences and agricultural sciences.

6. DELNET arranged several training programmes for participating libraries. DELNET activities for resource sharing are growing. It has made a breakthrough and has become the first operational library network in India.

Also, DELNET is launching in December, 1996 an online database entitled *Books in Print : New Titles from Indian Publishers*. The launching of this online database is being started with the publications of Oxford University Press and Penguin (India) Ltd.

INFLIBNET

A project of the University Grants Commission, it began its operations in 1991. INFLIBNET provided financial assistance to 54 university libraries, out of which only 17 have acquired hardware so far.

For promoting resource sharing INFLIBNET has created a union catalogue of 50,000 records. Theses/dissertation database has 65,000 records. Database of periodicals has 30,000 records. Its work on software development and training programmes is continuing.[3]

MALIBNET

For promoting resource sharing Madras Library Network (MALIBNET) has created :

(a) Database of current serials in 50 libraries

(b) Journal holdings database (15 member-libraries, 500 journals)

(c) Journal contents database (1,00,000 records for member-libraries)

(d) All INSDOC databases ported on MALIBNET

(e) Automative enquiry database (4,500 records besides CD-ROM search facilities, access to INTERNET)[4]

BONET, etc.

This may be noted that BONET in Bombay, MYLIBNET in Mysore, BALNET in Bangloare, ADINET in Ahmedabad, all supported by NISSAT, have not yet created their value added databases like union catalogues for resource sharing and are mostly offering E-mail and CD-ROM facilities[5].

High Profile Management and Mismanagement

INFLIBNET

1. It is interesting to note that when the report of the INFLIBNET Working Group was prepared in 1988, out of 6 full-time members in the Working Group four were library scientists[6]. Sixty six percent participation of librarians full-time in the preparation of the project report was commendable, although they got help from eleven other part time specialists. UGC approved their report. But when INFLIBNET started functioning from 1991, the role of librarians was almost missing. It could be that the UGC had little faith in the librarians as executors of the project and they were kept out except in case of a library consultant whose voice naturally was a solitary one.

2. From 1991 to 1996 the project was managed by non-librarians and the results are :

(i) Although automation process was started by funding only 54 university libraries, 17 libraries could only acquire hardware till now[7]. No achievements were made in resource sharing among university libraries during 1991-96, when in the original report of 1988 amongst the large number of targets fixed, it was expected that by March 1994, end users will be served by collecting documents from 400 nodes in the country and offered services mainly at the local level. It was an impressive target. The other important targets were :

(a) Union catalogue of nine million unique records of retrospective collections of 179 university libraries would be prepared during this period and offered for resource sharing purposes.

(b) At least 200 R & D institutions will be linked to INFLIBNET.

(c) Support will be given to 170 universities and

500 college libraries for library automation.[8]

When we compare the achievements of INFLIBNET as given in the Review Committee Report (1996)[9] with the projections listed above we notice that :

(a) Union Catalogue has 50,000 records, which are not of the required standard.

(b) Databases of theses/ dissertations (65,000 records)

(c) Serials database has 30,000 records.

The quality of databases prepared at some of the university libraries is very low and needs improvement[10]. No standardised software is yet available. Work is still going on[11]. The existing human resources are too inadequate to carry out the gigantic INFLIBNET programme[12]. Adequate representation of library experts is missing[13].

UGC had been fully aware through the reports that INFLIBNET had failed in its targets. In the union catalogue preparation alone there had been only 0.5% achievement when we compare the union catalogue of 9 million records targeted to 50,000 now available. Also, on 12th December, 1995 in the 355th meeting of the Commission it was decided to set up a Review Committee to look into the functioning of INFLIBNET. The Review Committee was informed that if it desired, it could give advice on the objectives and methodologies, and make recommendations. Yet the UGC in a hurry, for reasons best known to it, drafted a Memorandum of Association and Rules and got the INFLIBNET society registered in 1996 before the Review Committee report was submitted.[14] The objectives listed in Memorandum of Association were changed from those that were recommended in the original Working Group report of 1988.

Over and above, in the registered INFLIBNET society of 1996, provision has been made for nominating one library scientist to the Council[15] besides the Director of the National Library, who may or may not be a library scientist. In the Governing Board also out of 12 persons there is only one eminent librarian[16] who will be nominated by Chairperson, UGC. UGC is in full knowledge about the past performance of INFLIBNET and even then one Librarian is nominated, not even elected to the Board and the Council. One wonders why should the management structure of INFLIBNET be similar to that of Inter-University Centres which are not Information Technology Centres where decisions have to be immediately made. Information technology composition is changing rapidly and the whole culture is undergoing a vast and on-going transformation. It is hoped that the UGC knows that the students of library and information science coming out of Indian universities after doing B. Lib. Sc. or M. Lib. Sc. are unable to handle information technology work until some of the best ones get further training in computer and communication applications. How can the UGC fill the wide gap and provide efficient information technology manpower which is badly required at present to modernise the libraries?

It is the UGC approach towards IT applications in universities that needs to change. In INFLIBNET, which is part of IT application scenario, there should be both in its Council and Board, at least fifty per cent library and information science professionals who are elected out of the university librarians and not nominated. If the UGC has no election system in vogue, it has to evolve one to give proper representation to the university libraries for whom INFLIBNET is created so that the on-going dialogue on a host of issues that are part of union catalogue and database creation work and resource sharing through networking goes on not only in the committees but also in the Board and the Council.

As would have happened, the INFLIBNET Review Committee under the chairmanship of Dr. S Venkateswaran submitted its report in September 1996 and inter alia recommended a revised set of objectives for INFLIBNET[17] and adequate representation of library experts in the Board and the Council[18].

The question remains, is the UGC sincere about transforming university libraries? If it is, its work in information technology programmes should be handled by the professionals even at the policy level. Thus, it remains to be seen how soon UGC will accept INFLIBNET Review Committee (1996) recommendations and :

(a) Change the constitution of INFLIBNET Society;

(b) Provide library and networking software of international standards to INFLIBNET and the university libraries; and

(c) Achieve at least 50% of the targets as formulated in 1988.

NISSAT

Another agency that has been promoting library networks in India has been the National Information System for Science and Technology (NISSAT) in the Department of Scientific and Industrial Research. In 1986, NISSAT started its work on establishing CALIBNET for Calcutta[19] and now in 1996, after a lapse of ten years, no resource sharing has been done in Calcutta and there is no trace of a union catalogue of books available in Calcutta libraries[20]. Then what did NISSAT do? For reasons best known to NISSAT, union catalogue activity of books was never started in Calcutta. While Calcutta has the richest libraries in the country and scholars in the country have been wanting to have access to the resources available there, resource sharing work had never taken off. It looks that NISSAT had different priorities in view. And, let us have a glimpse of them.

NISSAT initiated the development of library software package called MAITRAYEE for the use of CALIBNET and the participating libraries. Leaving aside the amount spent on the development of the software through CMC Ltd., it is shocking to know that even in 1996 this software is not in use. Over and above NISSAT had no interest in knowing that for a library network, a software should have the capacity to develop union catalogues of books etc. and have the facility for full text databases. Those modules and facilities do not exist in this software. Whenever we want to know : a) How many libraries are using MAITRAYEE? and b) Is CALIBNET using MAITRAYEE? If so, how much data has been created on this software?, there are no replies either from NISSAT or CALIBNET. One would like to know, if MAITRAYEE was not working, what networking software did NISSAT develop for networking purposes. It is yet another sad story where the priorities adopted were wrong and the results have not been forthcoming. This needs to be appreciated that the timely adoption by NISSAT of CDS/ISIS, the software developed by UNESCO for distribution in India, was very well done. It did help libraries in database creation work and training of library personnel. But then NISSAT could not have expected to use CDS/ISIS as a software for networking purposes when UNESCO itself is promoting the use of TECHLIBplus in its libraries around the world. Although NISSAT did get some small application softwares prepared, they were hardly standard software and had no wider application. In fact if NISSAT had given a good library networking software to library networks and libraries in India, this measure alone would have been its major contribution. It failed to do so. In the article *CALIBNET on Stream*[21], by A C Mitra, the Director of CALIBNET, we get the picture of CALIBNET from 1994 when CALIBNET society was registered to the present date. But one wonders what went down the stream from 1986 to 1994. What are the achievements arising from millions of rupees spent by NISSAT during this period. Also, when we look at the CALIBNET achievements from 1994 to 1996, we notice :

a) There is no sharing of resources that is being done among Calcutta libraries.

b) There are no union catalogues prepared for such resources, and

c) There is no rationalisation of resources done.

But instead CALIBNET has now become a centre for CD-ROM based databases[22]. Libraries can access these CDs. This is probably how NISSAT wants to justify its programmes. The basic purpose of a library network is to share the resources available in the participating libraries, and for that matter reference tools such as union catalogues on-line databases etc. of the resources have to be made available. CDs could be procured by any institution and even a private agency could do so for commercial purposes or for research. That could not be the primary work of a resource sharing network.

NISSAT should know that the world is turning into an on-line web of information and until the library networks create value-added databases based on the resources of their participating libraries, they cease to exist as resource sharing library networks. It is to be regretted that the rich library traditions of Calcutta that needed utmost attention of the Government for modernisation and networking, have in fact be harmed by NISSAT-CALIBNET tie-up.

DELNET is yet another story which NISSAT tried to support in the beginning: From 1988 to 1992 DELNET was treated as a project of the India International Centre and NISSAT did give project grants. NISSAT also supported E-mail facility in DELNET and also provided 50 modems to libraries for promoting E-mail facilities among them. NISSAT's low-budget support to DELNET was satisfactorily going on until 1994 when NISSAT decided to provide grant to DELNET for three years i.e. 1994-95, 1995-96 and 1996-97 as detailed in Table 1.

Out of 6.78 lakh for 1994-95, Rs. 50 thousand were deducted by NISSAT in the final instalment which was released in March 1995 towards the revenue that DELNET was supposed to raise. However, why NISSAT spent part of the project money meant for DELNET is not known and whatever hardware etc they purchased out of it was never given to DELNET. Instead DELNET was given by NISSAT a PC-XT before 1994 as the sole hardware for networking.

As per the sanction letter, in 1995-96 DELNET was to receive Rs. 6.43 lakh as grant but DELNET had to return Rs. 4.75 lakh as revenue raised and during 1996-97 DELNET was to receive Rs. 6.37 lakh and had to pay Rs. 6.50 lakh back to them. Now this could be interpreted as that NISSAT wanted to close down DELNET. Why has Nissat chosen to act like that is not understandable particularly when DELNET had several achievements to its credit which no other NISSAT sponsored network. DELNET was following an active resource sharing programme, step by step. It could not be an e-mail based network. Under these circumstances DELNET, with great regrets had to refuse NISSAT funds for the next two years, i.e 1995-96 and 1996-97. Did NISSAT do the same thing with other networks? No. Ask ADINET, BALNET for instance, if not NISSAT.

As a result DELNET was financially in a bad shape and it was at that hour of its need when National Informatics Centre of the Planning Commission came to its rescue after surveying DELNET's contributions. This is the story of how NISSAT tried to finish the growing network in DELNET when it had failed in Calcutta.

NISSAT has supported networks in Bombay, Pune, Ahmedabad, Bangalore and Mysore and as has been pointed out elsewhere in this paper, in each of the centres resource sharing and union catalogue preparation for sharing of resources of participating libraries has not been going on. Why? Probably NISSAT considers use of E-mail and CD ROMs as the main activity of library networks. However, it remains to be seen how soon will DSIR appreciate the difference between the networking of the available library resources and acquiring of foreign databases. The two issues are separate and so are their purposes. If DSIR feels that in Science and Technology only the latest documents are needed then it should not promote city networks which have to incorporate all subjects and all types of libraries. If DSIR feels that resource sharing networks are important and fall in its scheme of things then they should be run as library networks and DSIR should immediately:

a) Provide library and networking software of international standard to the networks promoted by it or adopt DELSIS and TECHLIBplus to get a complete solution;

b) Get union catalogues of books, periodicals, grey literature etc prepared on a priority basis at these networks;

c) Promote rationalisation of resources at each network and monitor the results to save expenditure and make optimum use of documents available or to be procured in the libraries;

d) Get all such databases developed in which the libraries in a city specialise; and

e) Arrange the training of manpower to promote information technology and library networking in India besides organising meets and conferences.

A mention needs to be made of INSDOC and NIC which also made contributions to library networking. INSDOC established the network in Madras. Although it has not yet prepared the union catalogue of books, it has prepared the databases of current serials among others. MALIBNET is moving in the right direction as its databases will help in promoting resource sharing.

Another institution that has been promoting li-

Amount to be spent by:	1994 - 95 (Rs. in thousands)	1995-96 (Rs. in thousands)	1996-97 (Rs. in thousands)
DELNET	678	643	637
NISSAT	282	325	375
Revenue to be raised	50	475	650

Table 1: Nissat Grants to DELNET

brary networking is National Informatics Centre. NIC has not only given full support to DELNET but has a large communication base which all networks in the country can use. NIC's contribution by providing TECHLIBplus, the standard international software to Indian libraries at reduced prices is highly commendable. It remains to be seen how network promotors who have not been able to create a viable software themselves so far can make use of this offer and how soon. In this regard a mention may be made of ERNET of the Department of Electronics which is also providing communication facilities to educational and research institutions in the country. Its services need to be promoted.

It is hoped that the Government of India shall take all necessary steps to promote network facilities fast among libraries through proven library, computer and communication specialists and take corrective measures at the earliest.

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Four Pilgrims in Search of Vision and Redemption

A Study of David Williams's *The River Horsemen*

B.N. Singh*

Exploring the theme of vision and redemption in the work of a novelist who claims himself a progressive writer (so a communication from him assures me) and his masterpiece *The River Horsemen* (1981) as his most "iconoclastic" novel (*confessional Fictions* : 269) may sound hollow and unconvincing to a postmodern mind. Further, it will be very difficult for a twenty first century "technological man" to digest this metaphysical concept of vision and redemption, to accept it as a panacea for all his social and moral problems. And yet, it is perhaps only by being sceptical, questioning the existing belief and looking into the nature of things that Man, the technological man, will search for an alternate mode of existence.

David Williams's *The River Horsemen* is one such novel which tries to question some of the conventional modes of existence and build new ones by viewing the human problems through a wider and more penetrating perspective. The paper seeks to establish that in a world in which it has been conclusively proved that even an electron does not keep to its orbit all the time (Professor Hisenberg's 'Uncertainty Principle'), it is absurd to expect that man will conform to a system, believe in a methodical, purposive world order and a search for a certitude.

Since "Humanity is immense and reality has myriad forms", Williams speaks of the diversity of vision which life offers to a novelist. "Much difficult work, with little guarantee of illumination", says Williams (*The Confessional Fictions* : 269). The complexity in *The River Horsemen* is mainly due to the fact that is related from more than one point of view, and in the absence of the author's own explicit opinion it becomes difficult for the readers to get at his stance (Williams makes great demands on his readers). My paper argues that howsoever abstracted a novel may be, the rendering of reality in it is ultimately determined by the novelist's assumptions on the purpose and meaning of human existence. "The creative writer's concern to render life", says F.R. Leavis, "is a concern for significance, a preoccupation with expressing is sense of what most matters" (*Leavis* : xviii). I shall show that after making due allowance to the situational prejudice of a character when he passes a judgement and relating it to the evidence implicit in the events, it is not difficult to define Williams's vision of human predicament on this earth, its width and dimension.

Written against the backdrop of the Depression-ridden Saskatchewan, *The River Horsemen* details the story of five days canoe trip from Friday through Wednesday of the four misfits — two white and two Cree-paddling upriver from Lacjardin to Saskatoon, a harrowing eighty miles against the current after their borrowed tractor breaks down. The ethical connection which binds them together is the loss of "some vital human contact" (*Duffy*:762) — a parent, a child, a lover — as well as their guilty conscience perpetually being tortured by "the knife-edge of memory" (*The River Horsemen* : 51). Jack Cann, a failed faith healer and deserted by his childless wife, Nick Sobchuk, A Ukrainian boy carrying the news of his father's death to his insane mother, Fineday, a Cree who has first lost his son and then the love of his wife and Manybirds, a colosal womanizer who has just been scalped by a "bohunk barber" for committing adultery with his wife are the four restless wanderers in search of vision and redemption. "How these four find their way into the same canoe leading for Saskatoon is a fair question with no very dissatisfying answer, but let that go "(*Cavanagh* : np). Let us grant it as a postulate. The real problem is that these people never make convincing partners in the creative tangle we normally call a story. They are "spiritually agonized characters" (*Hancock* : np) and form a group of "grotesques with a common goal but diverging private obsessions". (*Hoy* : 326).

Williams makes great demands on his readers, the novelist 'performing with his self conscious eye

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on his clever readers' and challenging theme to make it out. The first sixty pages of the novel present a "Literary jigsaw puzzle" and demand that we pay attention and read on time and again in order to solve the riddle. It is closepacked and dense with meaning which will not give up its secrets on a first reading. As the meaning of a good poem comes to a reader after several readings, I agree with many critics that the full meaning reveal itself, explode in the mind, after repeated readings. It is not pretentious on Williams' part to expect several readings. If we recall James Joyce's assertion that he had taken eighteen years to write *Finnegan's Wake* (*The River Horsemen* took Williams four odd years to write) he saw no reason why it should not take eighteen years to read. It requires considerable agility on the part of the readers to match up half-stated details of the characters' histories in order to understand their pasts and what is going on in the present. This sort of technique serves as a reflection on the chaotic world of these people who are incapable of any significant action or initiative, implying an utterly pessimistic view of man as a helpless victim of his ontological fate. In order to depict the chaotic, irregular and fragmentary experiences of his characters, the novelist has placed them in an equally chaotic world full of chaos and disorder. Hence the world depicted in the first sixty pages of the novel serves as the "objective correlative" of the irregular and fragmentary experiences of these four decrepit characters.

Certain critics feel that the technique employed by Williams illustrates not only the characters' chaotic lives and their inability to communicate, but it also illustrates "the novel's inability to communicate" (*Cavanagh : np*). However, the difficulty arising for the reader in the first sixty pages point at the incommunicability of the characters' past experiences and their desperate failures to link them with their presents. Dennis Duffy rightly says, "The fragmented, taxing mode of narration works as well for Williams as for his master, in that it does not come off as a gimmick but rather as a style genuinely analogous to the characters' way of life" (*Duffy*: 762). The sense of alienation and anguish which becomes a characteristic trait of each of these characters in *The River Horsemen* constitute an essential part of the modernist thinking which, as Luckacs points out, implies an image of man, not as a social being (Aristotle's zoon politikon), but as "by nature solitary asocial, unable to enter into relationships with other human beings" (*Luckacs* : 20). An important and ironical consequence of this position in literature is that it leads not only to an attenuation of the objective reality but also to a fragmentation and eventful dissolution of the inner being (or subjectivity) itself, leaving nothing but a painful sense of emptiness in its wake. However in view of "an interest in places and communities that had some spiritual anchor, some vision of the world that belonged particularly to them" (*Hutcheon*:195), the novel raises certain fundamental questions. Its characters seem to look for an alternate mode of existence. Dennis Duffy while designating it "as one of English Canadian literature's finer exercises in the modernist mode" (761) perhaps means to say that *The River Horsemen* can be taken as a novel which shows "how firm a hold the postmodern tradition currently has on a regional imagination" (763).

During their voyage all the four river horsemen are tortured by memories that are provoked by present incidents. The journey undertaken by them acquires symbolic dimension. Paddling against a harrowing current becomes a metaphor for voyage within, a journey into the memory. The current always sweeps Williams' characters backwards, back to a pre-conscious past, in which primal motions dominate, the complex arabesques of self defer to simple type. They speculate on life, connecting past and present. Hence the journeys undertaken by them do not grow in linear direction, in fact no real end is in sight. There is no hope of reaching the destination at all, no expectation of fruitful arrival. Whereas Ullysses' journey in Homer's *Odyssey* is full of the hope of reaching the destination, of the achievement and joy of arrival, the scene and situation in *The River Horsemen* expresses the frustrations of the characters' journeys, symbolising imperfectibility of man's quest of and the failures of his vision.

While journeying down their memory lane, Nick's memories of his father's death and the insane mother haunt him all the time and leads to the break up of his emotional security. "The dislocation of his life sours his outlook, and a hailstorm, an upset stomach, and an auction at the outset of his narrative all stand up for the break up of his emotional security" (*MacKendrick* : 120). Jack Cann, apart from being constantly obsessed with the thought of his wife's elopement with a logger, his desperate failures in the act of healing becomes for him a "vengeful shell to reproach him with guilt" (*Cavanagh* : np). Williams says.

> He refuses to believe, that God can allow suffering or can stop the living from dying. There is a deep danger in resisting death. It causes more suffering. There is something destructive in God. I don't accept modern sociological theories of evil being environmentally caused. There is something dark and destructive in me that I have to keep watch on. There is something destructive in all of us . But evil can be overcome, through creativity, which is a healing process. Faith healers really have this power. I don't believe like W.O. Mitchell that they are sham with no insight into themselves. The shaman has to discover evil and work it out (Williams in *McCracken* : 36).

Similarly Fineday's narrative is marked by reflective ellipses such as the death of his son by influenza and the pangs of separation from his wife, a paragon of beauty and virtue who deserted him in the hour of crisis. Now he "remembers what it is to live in company" (*The River Horsemen* : 46). He is profoundly self-accusing and is fearful and guilty from having betrayed the direction of his spirit vision: he believes he is always "fighting the flow of things and that he is disloyal to his native heritage". Williams seems to be moved by Fineday's narrative. Williams confesses:

> It was getting a little too close for me. The section consisted of about eight chapters, and I did 51 drafts. It's obsessive but dangerous. The Indian locks himself in his cabin for 20 years and grieves and can't accept what he's lost. He joins another Indian, a Ukrainian boy and a lapsed revivalist preacher; together they make a canoe trip up river to Saskatoon. The river takes him through Batoche, and he encounters the dead in the place where his father had died. The journey is the turning point in his life (William in *McCracken* : 36).

All four being solitary fragments, it is fair question to ask how can they sustain or experience the apocalypse which comes to every man when the seats of blood and destruction are open to him. Duffy states that "Motifs of death and resurrection abound, while Jack the preacher's speech is an amalgam of biblical tags, evangelical exhortation and plain talk" (762), "yet", he warns us "no readers should confuse this scriptural infrastructure in style and typology with a sign that the book is an orthodox one (762). Further, it will be vain to look for any Christian interpretation when we recall Williams unwillingness to be innoculated against atheism, agnosticism and secular humanism:

> Fundamentalism is puritan. One believes there is no salvation "in anything except the individual's relationship to god. The private experience is important. Although I can no longer call myself a Christian and no longer view myself as religious, I will have the same concern for the personal vision and private experience" (Williams in *McCracken* : 36).

Can personal vision and private experience help the river horsemen come out of the dark 'Virgianal underworld' of deceit, duplicity, bestiality and betrayal ? It is interesting to note that the second epigraph of the novel is taken from W.B. Yeats' "magi". Williams and Yeats are poles apart, both ethically and culturally, yet their insistent quest for "Surrogate Theology" (Williams' personal vision and private experience and Yeats' new faith in private mythology) is not without relevance in case of understanding the predicament of the river horsemen. Rebelling against his father's agnosticism, William Butter Yeats used spiritualism to construct a new faith and a private mythology that became the inspirational basis for his poetry. Yeats was only one of several Edwardians who made literature into a "unifying surrogate theology". Richard Ellmann has pointed out the same tendency in James Joyce, Ezra Pound, T.S. Eliot and D.H. Lawerence. "A kind of inner belief pervades their writings, that the transcendant is immanent in the earthy, that to go down far enough is to go up" (Quoted by Rose : 13). All these writers used literature to spiritualize the mundane, to find what Granville Barker called "the prose for God" or what D.H. Lawrence described as a religious Agnosticism". Each of them wrote as " a priest of eternal imagination, transmuting the daily bread of experience into the radiant body of everliving life" (Joyce quoted by *Rose* :13).

To put it more clearly, these writers wanted to abolish the distinction between the spiritual and the mundane. They "invented" substitute religions, or substitutes for religions, that were firmly grounded on secular fact, and they infused spirituality into worldly things. If they no longer attended church, they remained intensely religious, for they had taken religion out of the churches and dispersed it into areas hither to considered profane, if not sacrilegious. Williams vision of life and his characters' search for vision and redemption can be understood if we look for this kind of alternative mode of existence the characters are looking for in *The River Horsemen*. The novelist's comment about the novel is a significant pointer in this direction. He writes in his *Confessional Fictions* :

> For each of the men in the novel loses his faith in some sustaining myth of his culture, at least as he defines it. The old shaman Fineday has given up believing in the spirit world; Many-birds blasphemes a powerless Thunder Bird; Nick Sobchuk falls with his 'mad' mother out of grace into a vision of her Ukranian myth of the fallen angles humanized by grief. Even the faith healer Jack Cann is shattered by his vision of a god who needs to be saved by man. The breaking of each myth leads, however, to new points of contact, if not to a new mosaic (269).

Among these four decrepit characters, a recurring pattern can be traced: they commonly pass through a phase of doubt or disbelief, ultimately discover that they cannot do without one or another of the comforts provided by religion, or their 'sustaining myth', and go on to construct some form of secular myth.

Jack Cann was gripped by passionate religious feelings all his life, and his loss of faith after the realization of the futility of his healing power which could not heal his wife's distress after the death of their infant son, leaves a ganwing emptiness in him. He exists in this notable portrayal, as an isolated man lost between the sureties of biblical promise and the uncertainties of his embittering experience" (*Partridge* :18). Yet his shattered "vision of god who need to be saved", leads to "new points of contact". He is the most impressive creation of Williams, "that rare literary phenomenon of a fictional fundamentalist whose religious zealotry and biblical language enrich and deepen the character rather than providing fuel for Satire" (*Hcy* :326)..

The River Horsemen confronts very basic human issues : the loss of children, of parents, of spouses, guilt associated with such losses, and "the difficulty of achieving a personal philosophy large enough to accommodate death" (Hoy : 326) Does *The River Horsemen* fail to provide a personal philosophy large enough to accommodate death or weather and death has been defied by the all four grotesques of the novel ? Williams says, "I'm concerned with the visionary, the problem of evil and the fear of dying. I believe that literature can provide an answer to death. In the 20th century, we've lost faith in the after life, and we need to find some symbols of immortality, some collective belief. There is no longer anything to heal the death fear" (William in *McCracken* : 36). Partridge refers to the "private pain" of the river horsemen and says that they "appear victims of their own obsessive beliefs rather than seekers after spiritual and social remedies" (*Partridge* : 18). The monologue method of narration "exposes fear as a root human condition — fear of the unexpected, sickness, death and, above all, of the myths a person or culture adopts to mediate the unpredictable" (*Partridge* : 18).

However, one thing is clear that existing system of belief is not adequate to accommodate their agonies and hence they are just like a ship without ruder. Helen Hoy considers *The River Horsemen* the "offspring" of *Huckleberry Finn* out of *As I Lay Dying* and says that Huck Finn, in a more incidental way, provides "the framework of the river voyage and some details of action" (*Hoy*:326). When their borrowed tractor breaks down, the four voyageurs of *The River Horsemen* rent a canoe and decide to paddle upriver. "Let's see dat canoe", Fineday quivers with excitement (*River* : 67) and. Many birds thinks of paddling his lost sexual partner around the moonlit river: "If I get one... I'll rent it w'en I get dere. I ain't hailin' no boatload a assholes wid me everywhere" (*River* : 66). Jack Cann, in his reverie, "astounded by how deeply it flows" (*River* : 66) and finding himself in "murky, uncanny" state is finally awakened. As the canoe moves upriver, it breaks the hopeless and constricting rhythm of their deadly dullness, alternating with the equally deadly seediness and uncertainty of life. There is sudden change in tone and atmosphere — a solemn sense of wonder, yet cheerful and laden with promise flows into the narrative at this point: "The craft sits like some green bird upon the water, its tail lifting and stirring .... upon that dark and swirling water" (*River* : 68). The river, but for Nick, promises liberation from the muddles and frustrations, the stupidities and varieties, the cruelties and treacheries of land-locked life on the banks.

For Nick, as the current slides by, "the river plucks my oar away" (*River* : 68) and "Anything is better than this floating unrest" (*ibid* : 69). He shudders to think of just eighty more miles of this hell' (*ibid* : 69). Current always sweeps him backward back to the dead father and insane mother with a feeling of guilt :

> The river swerves around a bend in these hills

> sweeps on, urgent, unavoidable. A sullen light shows on its face. I wrench at the water with my useless cue stick. Each stroke ahead is worth two back (*ibid* : 81).

The River brings to Fineday's mind a glorious time despite his tortured self.

> The River trembles lightly at bearing such a boat as this... so unlike our birch barks she once cradled in her silver stroking arms... Mother of the People.... your River People were not lost utterly. One of them is now returned to you....
>
> She flies at me like the sunlight winking off her waves ... pours under me, through me like the current of olden-times, waking olden-time memories .... so that I half expect to reach around another reach and find my boyhood self paddling down to meet us .... (*ibid* : 74).

That indicates more than narrative and realistic interest in character and story — a moral intention working through imaginative use of language. Imagination here draws upon the traditional lore of moral and spiritual perceptions, no doubt. But it also makes significant departures from them towards a humanistic direction. For one thing no one seems to have claimed as yet a 'Christian' source for the vision in *The River Horsemen*. Christianity, as far as it makes an appearance, appears here in caricature, in the forms of degraded inspiration debased ritual and ossified idea.

Jack Cann, though relates himself to Christ and is working with the same conviction Christ worked with 'He saved others, himself he can't save (*River* : 29) and 'Truly he taught us to love one another' (*ibid*: 117) and so many other things prescribed by religion, yet all his evangelism and confessional preaching turn into a kind of mass hysteria, acutely embarrassing, as an exposure of cheap religiosity and human gullibility. With his deep conviction that it is his duty to "keep alive in him the miracle of God's promise" (*River* : 30), he goes to heal suffering Paul, the only son of Peter Giesbrecht, but little Paul dies. He married Crystal despite knowing that she has not been "properly saved". It was a will of God who enjoined upon him to marry her. He says,

> There is a radiance in her look that implies me to my feet. The first time ever I looked on her face, I heard anew the voice of God. He said, "Jack Cann, take unto you this woman, this Crystal; make her to shine with my light and I will cause you to shine with mine". (*River* : 87)

He received the tremendous shock when faithful and beautiful Crystal "forsook" him for reasons unknown:

> I'll never know why my Crystal, who was faithful, forsook me. She was never timorous nor mistrustful, not she who stood by me through doubt, dirt, and depression, through even drouth and despair, to see our God work His miracles. Oh' I suppose I'd have had to be a fool not to see how difficult it was for her, night after night, as God transformed the lives of others, while, day by day, it was all we could do to keep both body and soul together. But, I thought we did at least cleave together through all our tribulations before I found out she was cleaving to another. Then for a time the light went out of my life. (*River* : 36)

The incident reveals how external and irrelevant, how remote from the practical concerns of people in actual life, Christianity had become.

Further, Jack's comically painful tussles with his 'conscience' are further exposures of conventional religion derived from a decayed protestant tradition insensitive to worldly wrongs. He has acute pangs of conscience when he realises that his "faith was enough to move mountains" (*River* : 163) but is unable to "create a child" (*River* : 166). The novelist has used the river metaphor to describe his agony :

> The river weeps. Like Jesus, the river weeps for me. It knows, like Jesus, The river is the way, the truth, and the life. (*River* : 172).

The meeting in Kewgardens School (*River* : 135-137) where he was cast out of the church for driving a demon out of the suffering proved an eye opener to Jack :

> The following day the saints of Kewgardens S.D. 1666 cast me out, though the old woman had been gloriously healed. The elders of my congregation, after a meeting that went on all Sunday long and half the night, concluded the Age of Miracles was now past. I wasn't to use their church any more for a mockery. Next, the school trustees, who served doubly as elders of the church, forbade the use of that country school. (*River* : 136)

Gradually and steadily, another awareness rises, as irresistibly as the river, overflowing the narrow banks of conventional modes of existence. It is the awareness of human equality, developed not abstractly but through the trials of active friendship and communion :

> So I tried to be like Jesus, though not my will but Thine be done. And I've done what I could to let Him heal the ills of folk, whether, they be doubt, fear, loneliness, or sorrow, or if they're blind, lame, halt, and poor in spirit.
>
> Perhaps He may raise us, then in spirit, since He no longer at least not yet — sees fit to lead us over Jordan. (*River* : 26)

His concern for Nick to liberate him is no longer an accidental adjustment to circumstances but an intentional moral act, thoughtful, responsible, well-planned, "Nick will think I broke my promise when I said God could heal his father but first we must wander forty years in a desert God, it doesn't bear thinking about" (*River* : 25). The education of Jack is among other things, an education is man's inhumanity to man or God's inhumanity to man and a consequent urge to intervene. The achievement of friendship, the sharing of joy and sorrow, the deep awareness of the other not as a tool of one's designs and desires, but as a unique human individual in his own right, is one of the high water marks of the narrative :

> Plagues of drought and locusts. Think about the poor farmers, their every hope of summer flattened, gone in the twinkling of an eye. This, too, was the year it seemed they would get a crop. Just this morning everything looked so green. And Nick, who left home so hopeful after lunch, what do I tell him next? I know his sisters aren't loving daughters. But Nick idolizes old Nick so Dagon lies broken and we ate fish on Friday; like an idolater I had to serve fish.
>
> "Nick" I call out in fear and great trembling. He may have crossed to safety between the walls of these elevators. Pray God he may.
>
> Suddenly I can't hold back my tears. I weep. I have not lived to the promise I gave when I moved in with them. (*River* : 26)

Jack's concern for the suffering souls is a mark of healthy instincts. It is significant to know that the hope indicated here is not merely through the Christian process; it is also indicated through the non Christian but essentially human way, the way of deep human love and vital passion, the consummation of which can be attained only through suffering and agonies.

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UNIVERSITY NEWS

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Higher Education and Development

Sardar Harcharan Singh Brar, the then Chief Minister, Punjab, delivered the convocation address at the tenth convocation of the Thapar Institute of Engineering & Technology (Deemed University), Patiala. He said, "Higher education is the main instrument for development and transformation. Universities can and should exercise a great influence on societal transformation and industrial development of any nation. Their output should reflect the quality of human resource development programmes. We cannot build a sustainable and prosperous India without human resource development which depends on the health and vitality of higher education". Excerpts.

It has been aptly remarked by a reputed philosopher that the noblest of all studies is the study of what man should be and how he should live. Therefore, education is more than just information, it is formation of the mind, it is mental irrigation. No doubt education is a life long process. Knowledge is important, still more so is the power to use it, but the most important of all is man's competence to distinguish between right and wrong between good and evil, particularly in today's world of shaken beliefs and uncertain values.

Evolution of a society comprising evolved beings cannot take place in a vacuum. It has to be reared by technological development and economic growth. An individual without the basic wherewithal of life such as food, shelter and clothing cannot think of evolving himself as a higher being; but mere technological development and economic growth can prove dangerous if the welfare of man for his moral development is neglected. Thus sustained efforts have to be made to "Integrate Culture with Technology", "Spiritual Growth with Material Advancement".

Technology is the human skill to convert innate energy into kinetic energy in order to make man's life more comfortable. It is needless to recount in modern times the marvels of technology such as its capabilities to scan the sky and the depths of oceans and to split atom. In fact Science and Technology have influenced our lives in all spheres of activity. Environmental pollution due to the blind use of technology and perfection of war machinery capable of annihilating life on our planet have to be discouraged stoutly. The competitive acquisition is already dividing man from man. Since Human Values remain unintegrated with the results of technology, human beings are being debased.

A university is both a centre of culture and academic excellence. The objectives of a university are not only the acquisition, preservation, dissemination and extension of knowledge but also promotion of scientific temper, inculcation of moral values and cultivation of the 'principle of togetherness'. Further more, an ivory-tower-existence of a university is a story of the past. A university must evolve a system of intimate interaction with society to meet its social and economic needs. In the memorable words of Jawahar Lal Nehru "A university stands for humanism, for tolerance, for reason, for progress, for the adventure of ideas and for the search for truth. It stands for the outward march of the human race towards even higher objectives. If the universities discharge their duty adequately, then it is well with the nation and the people. But if the temple of learning itself becomes a home of narrow bigotry and petty objectives, how then will a nation prosper or a people grow in stature?" Our late philosopher-President, Dr. S. Radhakrishnan regretted the omission of the "Culture of the Spirit" in our system of education. Einstein wished a happy blend of science and the spirit of religion when he observed thus "Science without religion is lame; religion without science is blind". We need a value based system of education. Commenting on the loss of values, Nehru once spoke thus "In our efforts to ensure the material prosperity of the country, we have not paid any attention to the spiritual element in human nature".

Higher education is the main instrument for development and transformation. Universities can and should exercise a great influence on societal transformation and industrial development of any nation. Their output should reflect the quality of human resource development programmes. We cannot build a sustainable and prosperous India without human resource development which depends on the health and vitality of higher education. Again, the level of economic development of a country depends on an adequate and up-to-date involvement of technology. Following the world trends, liberalization and globalization of Indian economy adopted by the Government of India, the technical institutes need to formulate programmes in accordance with our needs. It is now increasingly necessary to offer innovative courses of studies with a direct bearing on societal, national and international dynamics.

The benefits that both industry and university system can derive from Industry-Institution Interaction are fairly well-known and well documented, so I need not dwell on them. I would suggest that prominent Indian industries, including public undertakings, should adopt some educational institution as their own R&D house which will render the research pursuits of our educational system rewarding. In return, the industry should bear some portion of the revenue expenditure of the educational institutions, particularly the research cost, as is being done on this campus by Mr. L.M. Thapar through Thapar Corporate R&D Centre.

According to the report on 'Technology vision 2020' prepared by the Technology Information Forecasting and Assessment Council, the capital goods industry is expected to witness an average growth rate of 12-15 per cent and India will become the fifth largest producer of machine tools by the year 2000. By 2010 Indian companies will become original equipment suppliers to world makers in the transport equipment sector. Similar forecasts made for various technologies, such as, agro-food processing, market research & advertising industry and television, software industry, to mention a few, are very encouraging. I must add a word of caution here; in our over enthusiasm for economic growth we should not lose sight of the higher levels of human development. Dr. S. Radhakrishnan's observation on Education should attract our attention. He said "Any satisfactory system of education should aim at a balanced growth of the individual. It should not only train the intellect but also bring grace into the heart of man filling him with compassion for suffering humanity and unless that is achieved, education must be regarded as incomplete". It is a great responsibility of all the institutions imparting technical education to integrate culture of the spirit with breathtaking technological advances.

Knowledge is doubling and trebling with dramatic rapidity. You have to keep yourselves abreast of all the history-making "bursts" of knowledge; but while adding to your knowledge you must not forget the lesson of humility. It has been rightly remarked: "Knowledge is proud that it knows so much, wisdom is humble that it knows no more." Dignity of labour has been wisely emphasised and Nehru was not harsh when he once observed that "An Engineer who sits in the office and does not know how to work with his own hands is useless". The drift towards technology which is inevitable in the world today has to be balanced by some essential aspects of culture. Injustice, unhappiness, and brutality darken our minds but this dismal view should not be allowed to persist long. Our faith in the destiny and future of man should remain unshaken. Let me quote from the Upanishad a part of the valedictory exhortation given to the students after the completion of their studies : .

> "Distinguish the good from the bad.
>
> Avoid evil and always do what is right.
>
> This is the rule and this is the teaching".

Let us take a cue from Japan where the percentage of university students opting for Engineering courses is the highest in the world.

Millions of our brave men and women, known and unknown, struggled and suffered to make us what we are today — free citizens of a free country. Let us make younger generation fully aware of our great freedom movement which inspired several countries to be free. Let us not forget what Gandhi Ji said "...for me the end to salvation is through incessant toil in the service of my country."

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CAMPUS NEWS

University Administrators Meet

A seminar on 'Privatization of Universities — Role of University Administrators in the Changing Scenario' was recently held at Gurukula Kangri University Hardwar. Organised by the Association of University Administrators on the occasion of its annual meeting and hosted by Gurukula Kangri University, the seminar was attended by the university administrators (Registrars, Controllers of Examinations, Finance Officers, Deputy Registrars, Assistant Registrars including some Deans and Vice-Chancellors) from all over the country.

Inaugurating the seminar, Shri Sompal, Member of Parliament (Rajya Sabha) and Chairman, Home Affairs Committee of the Parliament, emphasised the need of assurance of quality education whether it was imparted through public sector or private sector. Since the Government was finding it difficult to finance the existing universities and also the increasing demand of education of the society; alternative methods of funding had been considered at various levels including setting up of private universities, he added and cautioned about the dangers of 'commercialisation' and 'profiteering' of education in the private sector. However, adequate safeguards could take care of these dangers, he opined. He said that there were already many private schools and colleges in the country. The question before us was as how to introduce private universities and ensure quality.

The keynote address for the seminar from Dr. G.D. Sharma, Secretary, University Grants Commission was circulated among the participants.

Dr. Dharmpal, Vice-Chancellor, Gurukula Kangri University, in his presidential address stressed that there should be in depth discussion on the topic of the seminar i.e., 'Privatization of Universitis - Role of University Administrators in the Changing Scenario' because the recommendations from the practising administrators of higher education would be significant from the practical point of view for implementation/taking decisions on such important matter as establishment of private universities.

Dr. (Mrs.) Pankajam Sundaram, Vice Chancellor, Mother Teresa Women's University, Kodaikanal (Tamil Nadu) presided over the Seminar at which 8 papers were presented and discussed.

There was discussion on various aspects of privatisation of education, particularly establishment of private universities and its impact on the role of university administrators. There were divergent views for and against privatisation of education, especially of higher education. The inherent dangers of commercialisation and profiteering, were highlighted. The question of ensuring quality of education and accountability were discussed and debated.

Shri C.R.B. Lalit, Registrar, Himachal Pradesh University while appreciating the role played by educational institutions in the private sector like BITS, Pilani, Thapar Institute of Engineering and Technology, Patiala, Tata Institute of Social Sciences, Bombay, etc. said that the moment Private Universities Act was passed by Parliament, there would be no dearth of unscrupulous people from the private sector entering the higher education area. There was therefore need of adequate safeguards in the Private Universities Bill before it was enacted. He further elaborated that only people who have sound background and reputation of contribution to the cause of higher education should be allowed to set up universities in the private sector.

Dr. S. N. Suri, Registrar, Institute of Public Administration, New Delhi cautioned about expected exorbitant tuition fees to be charged by private institutions and high costs involved on other items like hostel fees, donations etc, in the private universities to be established by private enterprises, Shri N.V. Ayyar, Registrar, Sushant School of Art and Architecture also expressed concern over high fees and donations etc in the private universities.

Dr. P.M. Nayak of Berhampur University highlighted the work ethics in teaching profession and high competition among the teachers in the public and private sector. He said that the character building and infusing fine human values among the students who seek education including higher education was the sole responsibility of the teachers whether they are working in the private sector or public sector. So there was need of high level of work ethics and accountability in the sphere of higher education.

Dr. T.K. Chatterjee vehemently opposed the establishment of private universities for the reasons of commercialization, profiteering and unequal opportunities to common people in a society like India.

Shri S. Sen Gupta, Registrar of the University of the Sky highlighted the efficiency, innovation and quality of education in the private sector. He said that no traditional university in the country had introduced academic programmes in new emerging areas like 'animation' which had been introduced by the University of Sky. There were many other new emerging areas of professional education which were not taken care of by the traditional universities because of inherent weaknesses in their structures and lack of initiative, etc.

Shri G.S. Vijaipal of the Indira Gandhi National Open University responding to the debate said that privatization of education was unavoidable as the State was not in a position to fund the existing institutions of higher education and was also not in a position to set up new universities to meet the increasing demand of higher education. He pointed out that every year 5-6 lakh students, after completing their schooling, seek higher education. According to projections of the University Grants Commission in its Ninth Five Year Plan (1997-2002), the country would require at least 60 new universities during this period to meet the increasing demand of higher education at the present rate of enrolment in higher education. It means that at least 10-12 new universities need to be established every year. Taking into consideration financial constraints of the State, the establishment of universities in the private sector was unavoidable. However, adequate safeguards were required in Private Universities Bill before it became an Act, he added. The Chairperson of the seminar Dr. (Mrs.) Pankajam Sundaram, Vice Chancellor, while summing up the discussion concluded that the following recommendations emerged out of the discussion :

1. There is a lot of scope of better management of human and physical resources of these universities by way of internal economies, generation of funds through consultancies, research, hiring of infratructure, floriculture, and Horticulture, etc. International marketing of higher education in the global market particularly among the developing countries needs to be pursued vigorously.
2. It is necessary that adequate precautions and safeguards are incorporated in the Private Universities Bill before its enactment. Only those people or private organisations be permitted to establish private universities who have an established reputation of promoting high quality education and good track record of contribution to social, cultural and economic welfare of the society.
3. Adequate steps need be taken for the professional development of university administrators by way of establishment of National Institute of Training with Regional Centres throughout the country to take care of the present pressing requirements of professional growth of lakhs of personnel (about 6 lakhs) involved in the administration and management of our universities, colleges and institutions of higher learning.

The General Body meeting of the Association of University Administrators elected Shri K.K. Bali of the Jawaharlal Nehru University as President of the Association for a term of one year.

Shri G.S. Vijaipal of the Indira Gandhi National Open University was re-elected Secretary of the Association for a term of 2 years.

The meting of the Association of University Administrators also passed the following resolutions :

1. The Ministry of Human Resource Development, the University Grants Commission and the State Governments should ensure parity of pay scales and service conditions between the teachers and university administrators for efficient and effective implementation of policies and programmes of universities and also for a better management of university administration.
2. University administrators should also be provided travel grant facilities and other opportunities similar to academic staff for participation in national and international conferences for their professional developmental and to equip them for better management of university affairs and administration.
3. University administrators should also be granted study/sabbatical leave for publish-

ing their administrative experience and expertise as professional research work, on the same pattern as it is permissible to academic staff to ensure parity in professional development of teaching and administrative staff of the universities.

The next seminar and conference of the Association of University Administrators will be held at Hyderabad to be hosted by Dr. B.R. Ambedkar Open University in October-November, 1997.

Management of Non-Print Media Resources

A four-day workshop on Management of Non-Print Media Resources was recently organised in New Delhi by the Commonwealth Educational Media Centre for Asia, in collaboration with Indira Gandhi National Open University. The basic objective of the Workshop was to highlight the role of non-print media as a major storage and dissemination system.

Inaugurating the workshop Prof. Ram Takwale, the Vice-Chancellor, Indira Gandhi National Open University (IGNOU) said that India was passing through a fast transition from the print media to the non-print media. In this scenario, the latter had a dynamic role to play. Stressing the importance of modern technology in promoting distance learning, the Vice-Chancellor referred to the extensive use of the mechanism of tele-conferencing by IGNOU for providing distance learners a two-way communication.

Dr. A. W. Khan, the Principal Communications Specialist at the Commonwealth of Learning, Vancouver, Canada, in his presidential address, mentioned that an unprecedented explosion of knowledge and the proliferation of electronic media in our times had made man ever hungry for information. One of the primary needs of the 21st century would be to evolve a standardised system for sharing information, he opined. The networking facilities, providing an easy access to information available at various resource centres all the world over, should come in handy at this critical juncture, he added.

Ms. Jai Chandiram, Director, Electronic Media Production Centre, IGNOU, in her valedictory address stressed that to attract and to retrain the attention of students an imaginative use of visuals was a must. And, for this the stock shots should be properly occasioned by libraries so as to facilitate their location and retrieval easy and fast.

Mr. K. Narayanan, Head of Administration and Finance, CEMCA, mentioned that the Commonwealth Educational Media Centre for Asia (CEMCA), New Delhi was setup by the Commonwealth of Learning, Vancouver in the year 1994 as a resource centre for various universities, institutions and NGOs dealing with distance learning in Asia. The present workshop, he added, was a follow-up of the recommendations of a workshop, organised by CEMCA in July, 1995.

Dr. Purnima Vyas, course-coordinator, revealed that the selection of topics/subjects for different sessions of the Workshop was made according to the responses to a questionnaire received by CEMCA from different organisations having non-print media libraries in the Asian region. These included : (1) management of non-print media resources; (2) introduction to classification, cataloguing and subject headings; (3) writing of abstracts; (4) management of stock shots; and (5) library automation.

Mr. Gopal Saksena, Director CEMCA observed that a workshop of this kind could claim success only if it might ignite in the participants an urge to go more professional and to explore possibilities of harnessing newer technologies with human creativity.

The major recommendations, made at the workshop included CEMCA's taking the lead in evolving a common format for documentation of non-print media resources, and in organising similar training courses, with a practical bias, in future.

19 participants, representing 17 Indian and foreign organisations attended the workshop.

Nehru Scholarship for Doctoral Studies

The Jawaharlal Nehru Memorial Fund has announced the grant of scholarships effective January 1997 under the scheme of Jawaharlal Nehru Scholarships for Doctoral Studies in different universities, leading to degree of Ph.D. The recipients are :

Philosophy & History of Science :

Ms. Neena George, CIE&FL, Hyderabad; Mr. Prasenjit Biswas, NEHU, Shillong; Mr Dolla Varaprasad Sekhar, JNU.

Comparative Studies in Religion & Culture :

Mr. Shamil Vayot Cheruvakodan, BHU; Ms. Honey Oberoi Vahali, University of

Delhi; Ms Mayjee Philip, JNU; Mr Lalan Kumar Jha, University of Delhi; Ms Yasmeen Arif, University of Delhi.

International Relations & Constitutional Studies :

Mr. Ashutosh Misra, JNU; Mr Virendra Mathur, University of Rajasthan, Jaipur; Ms Medini Dingre Gajanan, Pune University.

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Ms Kavita Sivaramakrishnan, JNU; Mrs. R. Asha, University of Madras; Ms Queeny Pradhan, JNU; Ms Archana Agrawal, BHU; Ms. Park Yong Ho, BHU.

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Interface of Social Change & Economic Development :

Ms. Disha Nawani, JNU; New Delhi.

Candidates studying in India for their Ph.D. degree will get Rs 4,000 per month as scholarship and Rs 8,000 per annum as contingency allowance. In addition, they will also get reimbursement of their University's tuition fees, etc. plus expenses on visits to their homes once a year.

Ms Soumhya Venkateson — Social Anthropology, National Museum, New Delhi and Ms Bhagyashree Nagesh Mandke, Economics & Pol. Science, University of Bombay have also been awarded Jawaharlal Nehru scholarships for pursuing courses of research at Cambridge University, UK.

West Zone Inter-Varsity Youth Festival

A five-day 12th West Zone Inter University Youth Festival was organised by Sardar Patel University from 20th to 24th November, 1996. The festival was jointly sponsored by the Association of Indian Universities (AIU) and the Department of Youth Affairs and Sports, Ministry of Human Resource Development, New Delhi.

Smt. Smita Shastri, Chairperson, Gujarat State Sangeet Natak Academy was the Chief Guest and Shri Anand Sagar, well known Producer and Director of Indian films, was the Guest of Honour at the inaugural function. Speaking on the occasion, they appreciated the efforts made through such youth festivals in bringing together the people of diverse regions and cultures to a common platform and thereby attempting to achieve emotional, cultural and national integration. Shri Sampson David, Senior Cultural Officer, AIU, explained the objectives and background of such youth festivals. Shri C.L. Patel, Chairman, Charutar Vidya Mandal, and Dr. V.S. Patel, Vice Chancellor, Sardar Patel University, also spoke on the occasion. The inaugural function was followed by a cultural programme which depicted "V - Fest at a glance".

In the event of Classical Music and Dance, the audience was impressed by the command of participants on taal, laya and aesthetics. In Classical Dance except a few performances in Bharatnatyam, Kuchipudi & Mohiniattam, most of the presentations were in the style of Kathak.

The Quiz competition saw very keen contest between all the 4 teams which had qualified for the final, with every team giving another a run for their money. In the Debate competition the participants put forward arguments in favour and against the topic "There is no danger to sovereignty of the country due to cultural invasion from the west". The topic of Elocution contest was "Future of the country is safe in the hands of the younger generation".

The Folk Dance competition highlighted the rich cultural heritage and wealth of our folk culture. It also depicted a fantastic blend of grace, expression, synchrony and choreography.

In the One Act Play competition 15 teams staged dramas on various powerful themes like corruption, nationalism, unemployment, gender equality, war and world peace, etc. An equal number of Skits and Mime were presented by various universities on the subjects like environment degradation, AIDS, corruption, oppression of weaker sections, superstitions, etc.

In the event of Fine Arts, Poster Making, Collage, Clay Modeling, Rangoli, Cartooning and on-the-spot Painting, the participants exhibited immense depth of skill in designing, creativity and artistic approach to the various themes presented in these competitions.

In the non-Competition presentations, orchestra, gazals, songs, mimicry, dance, skits, tec were presented.

Shri Jashbhai Saheb, in his

valedictory address, exhorted the youth to inculcate in themselves the pious teachings of our Gurus and keep our culture as lively as ever.

The Bombay University received the over-all rotating Championship Trophy. S.N.D.T. Women's University was declared the over-all runners-up.

RESULTS

MUSIC

Classical Vocal Solo

1. Shomkar S. Dadarkar
   University of Bombay, Mumbai
2. Rujul A. Pathak
   Gujarat University, Ahmedabad
3. Kum. Arti Manohar
   Nagpur University, Nagpur

Classical Instrumental Solo (Percussion)

1. Shripad Ganesh Jail
   University of Bombay, Mumbai
2. Shri S. D. Patil
   Dr. Babasaheb Ambedkar University, Aurangabad
3. Shri Vinod M. Deulkar
   Amaravati University, Amaravati

Classical Instrumental Solo (Non Percussion)

1. Shri Prabhanjan N. Pathak
   Amaravati University, Amaravati
2. Shri Deepak Kshirsagar
   J.N. Vyas University, Jodhpur
3. Ranjani Ramakrishnan
   University of Bombay, Mumbai

Light Vocal (Indian)

1. Kum. Anjali Soni
   R.D. V.V. Jabalpur
2. Kum. Meghana Bhave B.
   S.N.D.T. University, Mumbai
3. Shri Anar A. Kahthiyara
   Gujarat University, Ahmedabad

Western Vocal (Solo)

1. Shri Sydney J. Rodrigues
   Goa University, Goa
2. Zelda, Adi Mistry
   University of Bombay, Mumbai
3. Shri Manish M. Mandulwar
   Amaravati University, Amaravati

Group Song (Indian)

1. University of Bombay, Mumbai
2. Gujarat University, Ahmedabad
3. Barakatula University, Bhopal

Group Song (Western)

1. Goa University, Goa
2. University of Bombay, Mumbai
3. Dr. B.A.M. University, Aurangabad

Best Performance in Music

University of Bombay, Mumbai

DANCE

Folk Dance

1. H.S. Gaur University, Sagar
2. Bhavnagar University, Bhavnagar
3. Banasthali University, Banasthali

Classical Dance

1. Kum. Vinita Verma
   Devi Ahilya Vidyalaya, Indore
2. Kum. Kshama Hardas
   Nagpur University, Nagpur
3. Kanur Sharada Narayan
   S.N.D.T. University, Mumbai

Best Performance in Dance

1. Dr. Harisingh Gaur University, Sagar

LITERARY ARTS

Quiz

1. Sardar Patel University, Vallabh Vidyanagar
2. University of Bombay, Mumbai
3. Nagpur University, Nagpur

Debate

1. Subhodh Khandelwal
   Devi Ahilya Vishwa Vidyalaya, Indore
2. Kum. Aparna Tiwari
   Baraktulla University, Baraktullah
3. Sunil Fernandes
   University of Bombay, Mumbai

Elocution

1. Kum. Suhasini Sakhare
   Nagpur University, Nagpur
2. Ms. Usha Sharma
   Dr. B.A.M. University, Aurangabad
3. Kum. Deepti Chaurasia
   Devi Ahilya Vishwa Vidyalaya, Indore

Best Performance in Literary Arts

Sardar Patel University, Vallabh Vidyanagar

THEATRE ARTS

One Act Play

1. S.N.D.T. University, Mumbai
2. Banasthali University, Banasthali
3. Shivaji University, Kolhapur

Skit

1. Amaravati University, Amaravati
2. S.N.D.T. University, Mumbai
3. H.S. Gaur University, Sagar

Mime

1. S.N.D.T. University, Mumbai
2. North Gujarat University, Patna
3. Shivaji University, Kolhapur

Best Performance in Theatre Arts

S.N.D.T. University, Mumbai

FINE ARTS

On the Spot Painting

1. Doshi Payal

Gujarat University,
Ahmedabad

2. Rashmi Kumari
   Banasthali University,
   Banasthali
3. U.B. Kashiram
   Dr. B.A.M. University, Aurangabad

Collage

1. Vinay Z. Bagga
   Nagpur University, Nagpur
2. Chaitali Kulkarni S.N.D.T.
   University, Mumbai
3. Nilam Panchal
   Sardar Patel University,
   Vallabh Vidyanagar

Poster Making

1. Pappu Garg
   J.N. Vyas University,
   Jodhpur
2. Gopal Vilas Kumar S.R.T.M.
   University, Nanded
3. Subhangi Godse
   S.N.D.T. University, Mumbai

Clay Modelling

1. Rathod Jagdish
   Gujarat University,
   Ahmedabad
2. Ganesh Walker
   Nagpur University, Nagpur
3. Savita Rathi
   Banasthali University,
   Banasthali

Cartooning

1. Pradip Kulkarni
   Dr. B.A.M. University,
   Aurangabad
2. Mrityunjaya J. Sharma
   Sardar Patel University,
   Vallabh Vidyanagar
3. Chaitali Kulkarni
   S.N.D.T. University, Mumbai

Rangoli

1. Savita Rathi
   Banasthali University,
   Banasthali
2. Sarviya Bindya
   Bhavnagar University,
   Bhavnagar
3. Vinay Z. Bagga
   Nagpur University, Nagpur

Best Performance in Fine Arts

Gujarat University,
Ahmedabad

Overall Runnerup Trophy

S.N.D.T. University, Mumbai

Overall Championship Trophy

University of Bombay,
Mumbai

Medical Education Restructured

The Medical Council of India is reported to have made radical changes in the curriculum of medical education in the country keeping in view the recent trends and has made it need-based. It has been made more integrated. This was stated by Dr. Ketan Desai, President of the Medical Council of India in Ludhiana recently.

According to Dr. Desai, the duration of the first two professionals of the undergraduate programme has been reduced to one year each and the final professional (third) will be of two and a half years. The total period of studies for the undergraduate course will remain four and half years. Earlier each professional course was of one and a half years duration.

The new programme will be implemented from the next academic year (1997-98).

Certain changes in the postgraduate programme have also been made and a new syllabi drawn up. New subjects like nuclear medicine, tropical diseases, molecular biology and haemotology have been introdued.

We Congratulate...

Shri Manzur Ahmed who has taken over as Vice-Chancellor of Dr. Bhim Rao Ambedkar University, Agra.

News from Agricultural Universities

International Crop Science Congress

The International Crop Science Congress which concluded recently in New Delhi recommended harnessing of modern technologies as well as indigenous knowledge for a sustainable growth of agriculture.

The Congress said that World's natural resources, if managed scientifically, had capacity to meet the food demand till the year 2000 and beyond, adding that judicious harnessing of new and emerging technologies held great promise for alleviating the hunger of the world.

It further suggested that along with the technological breakthroughs, the non-technological creation in policy dimension and international cooperation should also be attempted for ensuring fair and equitable distribution of advanced technologies.

In this context, it was suggested that the Farmers Rights, Plant Breeders Rights and Intellectual Property Rights should be harmonised in such a way that besides rewarding the inventor, the invention and products derived from his invention should be within the access of all bonafide users throughout the world.

The Congress also stressed upon the need to increase the production of foodgrains and other agricultural commodities particularly in individual countries for achieving and maintaining comprehensive food security, especially in low income and food-deficit countries.

It expressed concern over the wide gap in technology transfer and suggested that institutional support should be provided to bridge it. It also underlined the need for developing mechanism for the assessment of technology, its refinement and subsequent transfer.

Recognising that the level of availability of technology and its development in different countries varies, it was recommended that the technology-deficient countries should make an attempt to introduce new technologies and products through appropriate transfer mechanism.

Referring to the decline in the rate of growth of productivity factors in intensive agricultural production areas, it recommended integrated management of soil, water, nutrients and pest. It also advocated an integrated approach to conservation and utilisation of plant genetic resources.

The congress noted the vital role of biotechnology for enhancing food production. For enhancing the yield potential of several crops, it said that with the help of interdisciplinary approach new super plant types could be developed with high biomass production.

Stressing upon the need for adopting hybrid varieties, it was felt that it would be a major thrust area in crop research in future. It hoped that asexual seed could revolutionise the hybrid approach and will particulary be helpful to farmers as they would not be required to buy fresh hybrid seed every year.

Recognising the inter-dependence in sharing genetic resources and technologies, institutional support for technology transfer has also been recommended. The Congress noted with concern the dwindling support to research and technology development in majority of the developing countries. In this regard, it urged that each country should at least earmark one per cent of its GDP for agricultural research. India has already committed to it and hoped to fulfil it in the next Plan also.

The Congress also resolved to establish an International Crop Science Society. Its Constitution, programme and mode of operation are being worked out.

Symposium on Arid Horticulture

Mr. Mahabir Prasad, Governor of Haryana, exhorted scientists to adopt more modern techniques and suitable strategy in agriculture to get fair share in the world trade. He said that India even though ranked first in fruit production and second in vegetable production in the world, yet it lagged behind in the export of these commodities. To get good share in the world market he urged the agricultural scientists to concentrate on the quality production of fruits, vegetables, ornamental crops, tea and coffee. He was inaugurating a two-day National symposium on arid-horticulture at Chaudhray Charan Singh Haryana Agricultural University recently. Organised by the Horticulture Society of Haryana on the occasion of its Silver Jubilee, the symposium was attended by over 150 scientists from different agricultural universities and research institutes in the country

Speaking on the scope of agricultural production in the arid lands of the country spread over approximately 2.9 lakh square kilometers mainly in the states of Rajasthan, Gujarat, Haryana and Punjab, the Governor described these as suitable for forestry, horticulture and animal production.

He urged the agricultural scientists to develop and promote alternate land use systems such as agro-forestry, agri-horticulture, dryland horticulture in arid regions of the country. He also urged them to generate drought tolerant varieties and suitable techniques for water harnessing and management as water will always be scanty in such regions.

To promote horticulture in dry parts of South-West Haryana, the Governor appealed to the scientists and the officials of the state Horticulture Department to jointly work out effective programmes. He said that both centre and state governments had also fixed priorities for the development of dryland areas. He called upon the scientists and development officers to come forward to help materialise these schemes.

Prof. J.B. Chowdhury, Vice-

Chancellor, who presided, said that during the past three decades the area under fruit crops had increased from 12.2 lakh hectares to 32.2 lakh hectares and the production level had risen to 44 percent. He said that although development in agriculture in arid regions had taken place, yet it was not in tune with the potential of these areas. He emphasised that the need to develop these areas more to improve the socio-economic conditions of the region.

The Vice-Chancellor disclosed that dryland agriculture section and a regional research station of the university had been catering to the needs of arid and semi-arid regions of the state. The scientists of these centres besides developing crop varieties suitable for these regions, had been generating and disseminating useful agricultural technology, he added.

Dr. K.L. Chadha, Dy. Director General (Horticulture) of Indian Council of Agricultural Research, Dr. B. Chaudhary of Indian Agriculture Research Institute, Drs. M.L. Pandita and Y.S. Malik, President and Secretary respectively of the Horticulture Society of Haryana were amongst the prominent scientists present on the occasion.

The Governor also honoured Drs. K.L. Chadha and B. Chaudhary for their outstanding contributions in the development of horticulture in the country.

Earlier, the Governor laid foundation stone of the building of Academy of Agriculture Research and Education Management.

News from UGC

Countrywide Classroom Programme

Between 1st and 7th January, 1997 the following schedule of telecast on higher education through INSAT-ID under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 6.00 a.m. to 7.00 a.m. and 1.00 p.m. to 2.00 p.m. The programme is available on the TV Network throughout the country.

Ist Transmission

6.00 a.m. to 7.00 a.m

2.1.97

"Career Counselling Computer Science : Career"
"Byron..Byron..Byron - II"
"Higher Education : Future Scenario"

4.1.97

"Eyes in the sky : Remote Sensing - 1"
"Jute Diversification : From Sunset to Sunrise - III"
"Electromagnetic Pollution"

5.1.97

"Handicraft : Toil, Tool & Talent"
"Career Counselling : Fine Arts Paintings"
"Solemnity in Glass"

7.1.97

"Water Chemistry in Thermal Power Station - III"

"Getting Ready for Magnification - II"

"Philatelic Pleasure"

IInd Transmission

1.00 p.m. to 2.00 p.m.

1.1.97

"Solar Heater"

"The Chola Temple Quartet - 1"

"Saffron Saga"

2.1.97

"Fibre Optic Communication"

"Extinction of Dinosaurs - I"

"Graham Greene : A Potrait by Kushwant Singh"

3.1.97

"Save Himalaya and Ganga"

"Sampling Technique - II"

"Algebric Structure - I Theory of Sets"

4.1.97

"The Story of Indian Painting - X : The Rebels"

"Family Series : The Winds of Change - II (New Zealand)"

5.1.97

"No Telecast"

6.1.97

"Trash into Cash"

"Classical Mechanics - V : Pseudo Forces"

"Sugar Science - VIII : Managing Sugar Cane Diseases and Pests"

7.1.97

"Supermolecules : from Chemistry to Biology"

"Bitter Fruits : Effects of Pesticides on Human Health"

Hindi Telecast

प्रातः 6.00 से 6.30 बजे तक

1.1.97

"पानी ही जिन्दगानी"

3.1.97

"योग द्वारा स्वास्थय लाभ - I"

6.1.97

"श्याम सखा सूरदास - II
भाव साधना"
"असंगठित महिला श्रमिक"

BOOK REVIEW

HIGHLY USEFUL

G.N. Brahmanandam*

J. Made Gowda, Marginal Costing. IMP publishers, 2922/1 MCC "B" Block, 5th Main, Davangere-577004, 1996. Pp. xii+324. Rs. 150/-.

In the modern competitive business world quick and right decision-making plays an important role. Almost all the Management Accounting textbooks available in the market have a few techniques of decision-making like Marginal costing, standard costing, Budgetary control etc. But, we find very rarely books which deal with only a single technique. The book on Marginal Costing by J. Made Gowda is one among them. The author has tried to explain the concept and application of Marginal Costing in detail with quite a number of illustrations, charts and graphs.

The book has been organised into four chapters. The first chapter deals with the concept of marginal costing. In this chapter, along with other aspects like segregation methods, contribution and P/V Ratio, Break-even analysis has been elaborately discussed making use of a number of relevant examples, charts and graphs relating to mono-product concerns as well as multi-product concerns. The assumptions underlying Break-even analysis have also been outlined. This particular chapter itself runs into 129 pages with as many as 49 illustrations.

The second chapter is devoted to C-V-P analysis. The interrelationship among the various determinants of profit, viz, costs, sales revenue, sales value are examined with appropriate illustrations.

The third chapter focuses mainly on the computation of operating profit through both absorption costing and variable costing. The material dealt with in this chapter highly differentiates marginal costing from full absorption costing.

The fourth chapter covers the application of marginal costing technique to different managerial decisions such as product diversification, make or buy, pricing, sell or further process, shut-down or continue, allocation of scarce resources, selection of profitable mix, application of linear programming, etc.

For easy understanding of the subject matter, 116 illustrations are given and 57 graphs and charts are portrayed. Further, the birds-eye view of gist presented in the beginning of each chapter followed with notes and references given at the end of each chapter is very helpful to the readers in easily understanding the concepts and subject matter.

On the whole this book is highly useful to students of commerce and management both at undergraduation and postgraduation levels.

Further, the book will be of immense use to the candidates pursuing professional courses like Chartered Accountancy, Cost and Works Accountancy, Company Secretaries, Chartered Financial Analyst, and CAIIB etc.

**Department of Commerce and Business Administration, Nagarjuna University, Nagarjuna Nagar-522 510.*

BEST BUY

Book Received

Amar Inder Singh*

V.S. Ramaswamy and S. Namakumari. Marketing Management — Planning, Implementation and Control —The Indian Context, 2nd edn. New Delhi, Macmillan India, 1995. Pp.xx+624. Rs.218/-.

The book under review is a milestone in the direction of marketing studies. Though the world at present looks like a small village due to technological advancements yet its vastness can't be ignored. Along with the geographical differences, there are a lot more fluctuating factors which constitute the overall environment of any place. In terms of business or production activities, any successful brand in United States may fail to create ripples in Indian market. Perhaps this is a major factor which influences the marketing strategies all-around the globe. And the success of this book lies in this very context that it has considered India as an individual identity and has discussed the basic marketing components, keeping in mind the socio-economic setup of India.

The text starts with elaborate analysis of the word 'Marketing' and the gradual changes in it depending upon the progress of society and growth of economy. It provides an indepth look at integral constituents of marketing i.e. organisation, consumers, society, profits — all that fully equips the reader to effectively understand the sensitiveness and hardness of

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**Department of Business Management, Punjabi University, Patiala-147 002.*

this significant process. Chapter II immediately charges about the Indian environment i.e. demographic, economic, social, and industrial status of this great nation. India is known for its diversity and the book rightly stresses various aspects related to Indian marketing conditions. This chapter could be little bit more explanatory (factors in allied areas indirectly related with market), to create a broader awareness as to what made India so different, so special from others around.

Marketing as a process can be divided into many interrelated core aspects — all equally important and utmost compulsory for any organisation to be successful i. e. Planning and specifying objectives, Four P's of Marketing, Consumer Behaviour, Marketing Research & MIS, Advertising and Sales Management, Strategic Planning & Global Developments. The present book has analysed each aspect in detail, duly aided by flow charts, tables and necessary data.

Chapter IV highlights the growing relevance of marketing to India, with relevant practical examples of various industrial/consumer products. Chapter V makes an interesting study and tries to define the marketing face of modern India, traditionally known as a primary-oriented nation.

The concepts of market segmentation and target market have their own status in overall marketing process. Chapter VI discusses various types of segmentation and factors involved. This specific chapter could be little more elaborated by including concepts like regional marketing — feasibility & implications, diffused/clustered demand, mass marketing, test market etc.

From Chapter VII onwards, the book treats of the planning process in marketing in detail including strategic planning. Good strategic planning means clearly outlining the direction, a company will pursue in its chosen environment and setting guidelines for allocating resources & effort. With the help of situational analysis, an organisation can evaluate opportunities and potential problems. These six chapters, effectively and in very simple terminology, convey the significance of strategies in marketing. Chapters XIII and XIV interact with the consumers — the ultimate fate-decider of any product. The scope of consumer analysis includes the study of who buys, what they buy, how they buy, when they buy, where they buy and how often they buy. The additional feature of the book is that it also analyzes the broad profile of Indian consumer. Consumer demographics are objective and quantifiable population characteristics. The special attention on Indian middle class is a demanding factor. A few lines on maturity/immaturity in buying behaviour of Indian consumer could make things more impressive.

A Sales forecast outlines expected company sales for a specific good or service to specific consumer group over a specific period of time under a well-defined marketing program. By accurately forecasting sales, the firm is able to develop a market budget, allocate market resources, measure success, analyze sales productivity, monitor the external environment and competition & modify market plans .Chapter XV fulfils all such objectives. Now comes managing the product, new product development and concept of product life cycle. In words of F. Russell Bichowsky, "No war, no panic, no bank failure, no strike or fire can so completely & irrevocably destroy a business as a new and better product in hands of a competitor." The book well explains the benefits of new products and shows how the product life cycle supports the quest for new items. Relevant examples from Indian companies further add charm and it is rightly said that quality has a cost, but it pays back.

Moving next to physical distribution and distribution channels—another important aspect of marketing. The objective is to organize a network of intermediaries and transportation facilities so that sales are enhanced

G. H. Patel Postgraduate Institute of Business Management
SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar

M.B.A. Admission- (1997-99)

Applications are invited for the Postgraduate Programmes leading to a Master's Degree in Business Administration. (M.B.A.) [MBA (Gen), MBA (Self Financed), MBA (NRI)]. Blank application forms will be available from the University Office between 16/12/1996 to 18/01/1997 on payment of Rs. 300/- (Rupees three hundered only) by crossed postal order or by crossed demand draft in favour of the Registrar, Sardar Patel University, payable at Vallabh Vidyanagar 388 120, Gujarat. Additional information will be available from University Office or G.H. Patel PG Institute of Business Management.

Vallabh Vidyanagar
Date.9.12.1996.

Kanubhai M. Patel
REGISTRAR

& costs are controlled. India, because of its geographical variations and infrastructural constraints, needs a special treatment on this front. Inventory management and warehousing system are two core areas & are given due status in the book. A slight addition could be of practical examples. The chapter on distribution channels is well proportioned.

Value is the worth of a product to a buyer and to an extent a buyer determines the value of a product by comparing its perceived quality with its price. Pricing indeed is a very vital decision and Chapter XXIII makes a fine attempt to cover it in a very comprehensive manner. A nice addition in the book is a chapter on marketing communications.

Advertising — heart beat of marketing process, may look a simple process but in actual practice it is not easy as it directly communicates with consumers & puts competitors on toes. Indian advertising scenario has undergone a tremendous change in recent years and the consumers are witness to it. Though the topic Advertising v/s Economic Development is detailed yet it needs to be more explanatory, considering its vital importance.

It is felt that the chapter on Marketing Organisation should have been a little ahead in hierarchy and Chapter III on New Economic Policies in the last part of the book. Finally in the last part, the book concentrates on Marketing Research and MIS, something integral in cut-throat competition & for better services to the consumers. The field of MR is most important and difficult part of the management studies. All printed material available on marketing research may look a lot impressive but they lack the magic touch. In the book under review, the authors have indeed successfully presented the research areas, that too in case of India where things are more unpredictable and complex. The last chapter on Rural Marketing is also good addition.

To conclude, it is certain that book is the best text available on Indian marketing conditions and the professional students of management studies will benefit a lot from this book. It is always very easy to criticize, specially we Indians love to criticize, yet the positive points of the book are enough to silence any such criticism.

DISTANCE EDUCATION CENTRE
A.P.S. UNIVERSITY, REWA (MP)-486 003
Admission Notice -1997.

Admission is open for the following courses:

(1) Bachelor of Library and Information Science (BLI Sc)
(2) P.G. Diploma in Computer Science and Application (PGDCA)
(3) P.G. Diploma in Environmental Impact Assessment (PGDEIA)
(4) P.G. Diploma in Pollution Management (PGDPM)
(5) Bachelor of Journalism and Mass Communication (BJMC)

Application form and information bulletin can be obtained by sending a crossed demand draft of Rs.150/- drawn in favour of Professor In-Charge, Distance Education Centre and a self addressed stamped (Rs. 9/-) envelop (30x24 cms). The university has no agents. The last date for sending application without late fees is **20th Jan. '97** and with late fee (Rs. 200/-) **25th Feb. '97.**

Prof. R.N. Shukla — **Ram Suman Pandey**
Prof. In-Charge — **REGISTRAR**

NATIONAL INSTITUTE OF EDUCATIONAL PLANNING AND ADMINISTRATION
17-B, Sri Aurobindo Marg, New Delhi-110016.

Applications are invited for one post of Computer Programmer in the pay scale of Rs. 2375-75-3200-EB-100-3500. Age and qualifications for the post are given below.

Age Preferably Below 35 years
Educational Qualifications
Essential
(a) Master's degree in Computer Science/Application/Physics/Statistics/Maths/Operations Research with one year experience; or
(b) Bachelor's degree in Computer Science/Physics/Statistics/Maths/Operations Research and recognised P.G. Diploma in Computers with at least 4 years of experience.
Deputation/Transfer
(a) Officers holding analogous post on regular basis from Central/State Governments, Universities Professional and Research Institutions and Bodies :
(b) Possessing qualifications prescribed above
(period of deputation shall not ordinarily exceed 3 years)
Note
1. Candidates already in employment under government/semi-government organisations/autonomous bodies should send their applications through proper channel.
2. Other things being equal, preference will be given to SC/ST candidates.
3. Candidates from outside Delhi called for interview will be paid single return second-class train fare by shortest route.
4. Person must be ready to work on shifts and on holidays.
5. Period of Probation—two years.

Applications from candidates fulfilling the required eligibility conditions alongwith attested copies of certificates, recent passport size photograph and a non-refundable crossed postal order of Rs. 20/- (not required in the case of SC/ST candidates) drawn in favour of the Registrar, National Institute of Educational Planning and Administration, 17-B, Sri Aurobindo Marg, New Delhi-110016 should reach him within one month of the publication of this advertisement.

The Institute reserves the right to alter/modify the conditions regarding eligibility. Higher start can be considered in the case of experienced and qualified persons.

REGISTRAR
— davp 1192 (10) 96

RESEARCH IN PROGRESS

A list of reseasch scholars registered for doctoral degrees in Indian Universities

SOCIAL SCIENCES

Sociology

1. Chaube, Vivek. **Sagar Nagar ke sameepasth evam doorasth gaon per nagarikaran ka prabhav.** HS Gour. Dr R M Ram, Department of Sociology, Dr Harisingh Gour Vishwavidyalaya, Sagar.

2. Jadhiya, Prabhavati. **Ek nagariya samudaya, Sagar, mein karyarat Hindu istriyon kee parivartansheel pariesthiti evam bhumika : Ek samajshastriya adhyayan.** HS Gour. Dr. R M Ram, Department of Sociology, Dr Harisingh Gour Vishwavidyalaya, Sagar.

3. Jain, Meena. **Jain mahilayon mein samajik, dharmik va arthik chetna ka swarup : Ek samajshastriya adhyayan — Damoh Nagar kee Jain mahilayon ke pariprekshya mein.** HS Gour. Dr A P Singh.

4. Lawrence, Jasmine. **Mahila shramikon kee samajik paristhiti evam unki samasyayen : Chhindwara Vikaskhand ke vishesh sandarbh mein.** HS Gour. Dr S N Sharma.

Anthropology

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Russian

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Sanskrit

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Punjabi

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18. Project Coordinator (Salt Affected Soil and Use of Saline Water in Agriculture), Central Soil Salinity Research Institute, Karnal (One Post)

Qualification Essential : i) Doctoral degree in Soil Science, Agronomy or Soil and Water Engineering. ii) & iii) As in Item No.16 (ii) and 2 (iii) above. iv) Experience of Research work related to salinity problems in agriculture.

19. Project Coordinator (Agronomy), Project Directorate for Cropping Systems Research, Modipuram (One Post)

Qualification Essential: 1) Doctoral degree in Agronomy or in related discipline. ii) & iii) As in Item No.16 (ii) and 2 (iii) above. iv) Specialisation and experience in Cropping System/Farming System Research.

20. Project Coordinator (Soil Test Crop Response), Indian Institute of Soil Science, Bhopal (One Post)

Qualification Essential: i) Doctoral degree in Soil Science/ Agronomy. ii) & iii) As in Item No.16 (ii) and 2 (iii) above. iv) Specialisation and experience in soil chemistry and soil fertility with special reference to soil testing and crop correlation.

21. Project Coordinator (Application of Plastics in Agriculture-APA), Central Institute of Post Harvest Engineering and Technology, Ludhiana (One Post)

Qualification Essential : i) Doctoral degree in Agriculture Engineering or Civil Engineering/Chemical Engineering/Mechanical Engineering, working in field of Agricultural Engineering in general. ii) & iii) As in Item No. 16 (ii) and 2 (iii) above. iv) Specialisation and/or experience in the field of use of plastics in Agriculture such as covered cultivation, mulching, packaging storage etc.

22. Project Coordinator (Fruits), Central Institute of Sub-Tropical Horticulture, Lucknow (One Post)

Qualification Essential : i) Doctoral degree in Horticulture/ Plant Breeding or Plant Physiology. ii) & iii) As in Item No. 16 (ii) and 2 (iii) above. iv) Sufficient Research experience and specialisation in resolving production problem of sub-tropical fruits.

23. Project Coordinator (Pigs), Indian Veterinary Research Institute, Izatnagar (One Post)

Qualification Essential : i) Doctoral degree in Animal Science and related discipline. ii) & iii) As in item No. 16 (ii) and 2 (iii) above. iv) Specialisation and experience of research in Pig Breeding.

24. Project Coordinator (Rodent Control), Central Arid Zone Research Institute, Jodhpur (One Post)

Qualification Essential: i) Doctoral degree in Zoology/Entomology or any other related discipline. ii) & iii) As in item No. 16 (ii) and 2 (iii) above. iv) Specialisation and experience of research on rodent pests of crops and homestead.

25. Zonal Coordinator, Zone-III, ICAR Research Complex, Barapani (One Post)

Qualification Essential : i Doctoral degree in any branch of Agricultural Sciences. ii) & iii) As in Item No. 16 (ii) and 2 (iii) above. iv) Specialisation in Agricultural extension, training and development.

26. Head Livestock Product and Technology Division, Indian Veterinary Research Institute, Izatnagar (One Post)

Qualification Essential : i) Doctoral degree in Livestock/ Products Technology/Meat Science/Meat Technology. ii) & iii) As in Item No. 16 (ii) and 2 (iii) above. iv) Specialisation and experience in the field of Livestock Products Technology.

27. Head, Veterinary Surgery Division, Indian Veterinary Research Institute, Izatnagar (One Post)

Qualification Essential : i) Doctoral degree in Veterinary Surgery. ii) & iii) As in Item No. 16 (ii) and 2(iii) above. iv) Specialisation and experience in the field of Veterinary Surgery.

28. Head, Virology Division, Indian Research Institute, Mukteswar (Kumaon) under I.V.R.I., Izatnagar (One Post)

Qualification Essential : i) Doctoral degree in Veterinary Bacteriology and Virology or Veterinary Virology. ii) & iii) As in Item No. 16(ii) and 2(iii) above. iv) Specialisation and experience in the field Veterinary Virology.

29. Head, Dairy Cattle Breeding Division, National Dairy Research Institute, Karnal (One Post)

Qualification Essential : i) Doctoral degree in Animal Genetics and Breeding/Animal Breeding/ Animal Genetics/ Dairy Husbandry/Livestock Production and Management. ii) & iii) As in Item No. 16(ii) and 2(iii) above.

iv) Specialisation/experience in coordination and Management of Research Programme in the field of Quantative Genetics/Population Genetics/Biometrical Genetics/Animal Breeding/Cytogenetics/Ommune Genetics/Molecular Genetics/Biochemical Genetics.

30. Head, Perennial Cropping System Division, Central Arid Zone Research Institute, Jodhpur (One Post)

Qualification Essential : i) Doctoral degree in Plant Breeding/Horticulture/Economics/Botany/Genetics and Cyto-genetics/Agrostology/Forestry. ii) & iii) As in Item No.16(ii) and 2 (iii) above. iv) Specialisation and experience of research on perennial crops.

31. Head, Textile Manufacture and Textile Chemistry Division, Central Sheep and Wool Research Institute, Avikanagar (One Post)

Qualification Essential : i) Doctoral degree in Textile Technology/Textile Chemistry with specialisation in Textile Physics/any of the above subjects. ii) & iii) As in Item No.16(ii) and 2(iii) above. iv) Relative specialisation and relevant experience cognate to the job requirement in the field of Textile Technology/Textile Manufacture/Textile Physics/Textile Chemistry.

32. Head, Crop Protection Division, Sugarcane Breeding Institute, Coimbatore (One Post)

Qualification Essential : i) Doctoral degree in Plant Pathology/Entomology/Nematology. ii) & iii) As in Item No.16(ii) and 2 (iii) above. a) Specialisation in modern Research Methodologies Crop Protection programme and specialisation in Breeding for varietal resistance/Biological control. b) Five years research experience on sugarcane.

33. Head, Plant Physiology Division, Indian Agricultural Research Institute, New Delhi (One Post)

Qualification Essential : i) Doctoral degree in Plant Physiology/Botany/Agriculture Botany/Crop Physiology. ii) & iii) As in Item No.16(ii) and (iii) above iv) Specialisation and experience:- a) experience of research/teaching extension education in one or more aspects of Plant Physiology. b) specialisation in any field of Plant Physiology.

34. Head, Nematology Division, Indian Agricultural Research Institute, New Delhi (One Post)

Qualification Essential: i) Doctoral degree in Nematology or in Zoology/Entomology/Plant Pathology with specialisation in Nematology. ii) & iii) As in Item No.16(ii) and 2 (iii) above iv) Specialisation and experience:- a) experience of research/teaching/extension education in Nematology. b) specialisation in any field of Nematology.

35. Head, IARI Regional Station, Pusa (Bihar) (One Post)

Qualification Essential : i) Doctoral degree in any branch of Agricultural Science or any other related subjects. ii) & iii) As in Item No. 16 (ii) and 2(iii) above. iv) Specialisation and research experience in improvement of Agricultural and Horticultural Crops as evidenced by development and release of new varieties.

36. Head, IARI Regional Station, Katrain (H.P.) (One Post)

Qualification Essential : i) Doctoral degree in any branch of Agricultural Science of any other related subjects. ii) & iii) As in Item No.16(ii) and 2(iii) above. iv) Specialisation and research experience in improvement and Seed Production of Vegetable Crops, as evidenced by development and release of new varieties.

37. Head, IARI Regional Station, Karnal (One Post)

Qualification Essential :i) Doctoral degree in any branch of Agricultural Sciences of any other related subjects. ii) & iii) As in Item No.16(ii) and 2(iii) above. iv) Specialisation and research experience in Crop improvement and Seed Production of Agricultural and Horticultural Crops.

38. Head, IARI Regional Station, Indore (One Post)

Qualification Essential : i) Doctoral degree in any branch of Agricultural Science or any other related subjects. ii) & iii) As in Item No.16(ii) and 2(iii) above. iv) Specialisation and research experience in Crop improvement and seed production of cereals, as evidenced by development and release of new varieties.

CENTRAL RICE RESEARCH INSTITUTE, CUTTACK

39. Head, Agronomy Division (One Post)

Qualification Essential : i) Doctoral degree in Agronomy. ii) & iii) As in Item No.16(ii) and 2 (iii) above. iv) Specialisation and experience in the field of Rice Agronomy.

40. Head, Bio-Chemistry Division (One Post)

Qualification Essential : i) Doctoral degree in Bio-Chemistry/Plant Bio-Chemistry. ii) & iii) As in Item No.16 (ii) and 2 (iii) above. iv) Specialisation and experience in the field of Rice Bio-Chemistry.

41. Head, Plant Physiology Division (One Post)

Qualification Essential : i)Doctoral degree in Plant Physiology. ii) & iii) As in Item No.16(ii) and 2(iii) above. iv) Specialisation and experience in the field of Rice Plant Physiology.

42. Head, Genetic Resources Division (One Post)

Qualification Essential : i)Doctoral degree in Botany/Eco-Botany/Genetics and Plant Breeding. ii) & iii) As in Item No.16(ii) and 2 (iii) above. iv) Specialisation and experience in the field of Rice Genetic Resources.

43. Head, Extension, Communication and Training Division ECT (One Post)

Qualification Essential : i) Doctoral degree in Agricultural Extension/Extension Education. ii) & iii) As in Item No.16(ii) and 2(iii) above. iv) Specialisation and experience in the field of Extension, communication and training.

44. Officer-in-charge, Central Rainfed Upland Rice Research Station, Hazaribagh (Bihar) (One Post)

Qualification Essential : i) Doctoral degree in any branch of Agricultural Sciences. ii) & iii) As in Item No.16(ii) and 2 (iii) above. iv) Specialisation and experience in the field of any branch of Agricultural Sciences.

45. Officer-in-charge, Central Rainfed Lowland Rice Research Station, Kharagpur (West Bengal) (One Post)

Qualification Essential : i) Doctoral degree in any branch of Agricultural Sciences. ii) & iii) As in Item No.16 (ii) and 2 (iii) above. iv) Specialisation and experience in the field of any branch of Agricultural Sciences.

46. Head, Crop Protection Division, Central Tuber Crops Research Institute, Thiruvananthapuram, Kerala (One Post)

Qualification Essential : i) Doctoral degree in Agricultural Entomology/Plant Pathology. ii) & iii) As in Item No.16(ii) and 2(iii) above. iv) Specialisation in Tropical Tuber Crops and relevant experience cognate to the job requirement.

CENTRAL INSTITUTE OF FISHERIES TECHNOLOGY, COCHIN

47. Head, Engineering and Instrumentation Division (One Post)

Qualification Essential : i) Doctoral degree in Chemical/Mechanical/Electrical Engineering/Instrument Technology. ii) & iii) As in Item No.16(ii) and 2 (iii) above iv) Specialisation and experience in published work of high quality in Research/Teaching with special reference in any branch of Chemical/Mechanical/Electrical and Instrument Technology.

48. Head, Extension Information and Statistics Division (One Post)

Qualification Essential : i) Doctoral degree in Chemistry/ Biochemistry/Food Technology/Fish Processing/Marine Science. ii) & iii) As in Item No.16(ii) and 2(iii) above. iv) An eminent Scientist with published work of high quality actively engaged in Research/Teaching/Extension Education with special reference to Fishing Technology/Fish Processing.

49. Head, Biochemistry and Nutrition Division (One Post)

Qualification Essential : i) Doctoral degree in Chemistry/ Biochemistry. ii) & iii) As in Item No.16(ii) and 2(iii) above. iv) An eminent Scientist with published work of high quality actively engaged in Research/Teaching with special reference to Biochemistry/Nutritional aspects of Fish preservation Processing.

50. Head, Quality Assurance and Management Division (One Post)

Qualification Essential : i) Doctoral degree in Chemistry/ Biochemistry/Food Technology/Fish Processing. ii) & iii) As in Item No.16 (ii) and (iii) above. iv) Specialisation and experience as eminent Scientist with published work of high quality actively engaged in Research/Teaching with special reference to Fishing Technology/Fish Processing.

51. Architect (T-7), Indian Council of Agricultural Research Headquarters, New Delhi (One Post). (Reserved for S.T.) Pay Scale Rs. 3000-4500. Age below 45 years

Qualification Essential : i) Bachelor's degree in Architecture or equivalent professional qualifications of recognised University/Institution. ii) 7 years experience in the profession. iii) Should be registered under Architect Registration Act, 1972.

Note : i) Qualifications are relaxable at discretion of the Board in case of candidates otherwise well qualified. ii) The qualification regarding experience is relaxable at the discretion of the Board in the case of candidates belonging to the SC & ST if, at any stage of selection, the Board is of the opinion that sufficient number of candidates from these communities possessing the requisite experience are not likely to be available to fill up the vacancy reserved for them.

Desirable : i) Associateship of Institution of Town Planner/ Architects in India or equivalent. ii) Experience in preparing re-development and housing schemes and Civil design scheme as relevant to scientific research institutions.

IMPORTANT NOTE :

i) In respect of posts appearing at S.Nos. 23, 26, 27, 28 the candidates selected for appointment to the posts in Animal Science disciplines and possessing degree in Veterinary Science/Veterinary Science and Animal Husbandry followed by Masters and Doctoral Degree in the relevant discipline will also be entitled to non-practicing allowance as admissible under the rules from time to time subject to fulfilment of condition of entitlement for the same as prescribed by the Council.

ii) The candidates who have already applied for the posts appearing at S. No. 17, 18, 22 and 23 in response to previous advertisement of ASRB must also send fresh applications. The fee already paid by the candidates alongwith their earlier application will be adjusted. To facilitate this they are advised to indicate the particulars of the fee already paid in the relevant column of the application form.

iii) Those who had already applied for the posts at S. No. 35, 36 and 37 in response to the earlier Advt. No. 3/95 of ASRB need not apply again.

iv) The posts appearing at S.No. 1 to 50 will be filled up on tenurial basis for a period of five years. However, retirement age for all scientific posts is 60 years.

CLOSING DATE FOR RECEIPT OF APPLICATIONS IN AGRICULTURAL SCIENTISTS RECRUITMENT BOARD IS **21.1.1997.**

(For candidate from abroad and in the Andaman and Nicobar Island, Lakshdweep, Minicoy and Amindivi Islands, States/Union Territories in the North-Eastern Region, Ladakh division of J & K State, Sikkim, Pangi, Sub-division of Chamba Lahul and Spiti districts of Himachal Pradesh, last date will be **5.2.1997.**)

GENERAL INSTRUCTIONS :

i) For application form, please write to the Secretary, Agricultural Scientist Recruitment Board, Krishi Anusandhan Bhavan, Pusa, New Delhi-110012. Request for forms must specify Advertisement No. 3/96 name of the post and item no. and should be accompanied by a self addressed unstamped envelope (23x10 cms. size). ii) Separate application, with separate fee separate no objection certificate, separate vigilance clearance certificate is required for each post. iii) Application forms complete in all respects should reach the office of the ASRB together with the application fee of Rs. 8/- (No fee for SC/ST candidates) in the form of crossed Indian Postal Order drawn in favour of the Secretary, Agricultural Scientists Reruitment Board by the closing date. Applications received after the closing date will not be entertained. In case a candidate anticipates delay in forwarding of his application through proper channel, he must send an advance copy of the application alongwith the fee which must reach this office on or before the closing date. iv) Candidates abroad may apply on plain paper and send their applications together with an International Postal Order/Bank draft covering the application fee drawn in favour of the Secretary, Agricultural Scientists Recruitment Board so as to reach this office of ASRB by the closing date. In countries where regular commercial channels are not available, the candidates can deposit the application fee in local currency with the Indian Mission/Posts abroad, who in turn will issue an R.B.I. draft in favour of Secretary, Agricultural Scientists Recruitment Board, New Delhi. v) The prescribed Essential Qualifications are minimum and possessing of same does not entitle candidates to be called for interview. Where the number of applicants is large, the Board may restrict the number of candidates for interview to a reasonable limit on the basis of qualifications and experience higher than the minimum prescribed in the advertisement. vi) If required, candidates must appear for personal interview. vii) Higher initial pay may be recommended by the ASRB for specially qualified and experienced candidates for all the posts. viii) For all Technical posts and other Non Scientific position a screening test may be conducted by the Board to be followed by an interview. ix) T.A. contribution will be admissible to those called for interview as per ICAR rules. x) Crucial date for determining the age limit for candidates will be the closing date for receipt of applications from candidates in India. xi) Canvassing in any form will disqualify a candidate.

davp 1020/13/96

University Grants Commission
B.S. Zafar Marg, New Delhi 110 002.

RESULT OF THE UGC TEST FOR JUNIOR RESEARCH FELLOWSHIP (JRF) AND ELIGIBILITY FOR LECTURERSHIP HELD ON 30.06.96.

The candidates whose Roll Numbers are given below have qualified the UGC-NET Test subject to the fulfilment of eligibility conditions laid down for the test.

General Candidates

For Junior Research Fellowship Award and Eligibility of Lectureship

E020113, B020142, M020190, T020285, N020381, R020419, R030277, T030559, A030930,
P031112, T070016, T090089, H090138, E090204, N090599, N090907, T091105, K100438,
M100637, P100653, P100687, H110020, E130096, H130304, K140313, K180070, D180282,
A180482, E210002, D210073 A210083, K210106, T210193, H210432, B210595, P210828,
R220001, D220560, D220921, H230091, K230924, N231000, D240046, N240112, H240156
M240164, A240172, N240205, K240229, D240289, T240297, B240325, R240361, D240411,
R240435, K240461, A240529, N240545, T240605, P240750 R240872, E240904, P240955,
B241067, T241083, D241115, E241135, R241143, A241163, R241217, R241221, E241247,
B241301, D241493, M241797 A241942, N242088, T242283, R242284, T242401, M242414,
T242473, K242502, P242580, B242666, B260043, B280078, N280190, T280191, H280202
D290096, R300085, E300155, N330022, R330286, K330289, T330306, K330314, K330445,
N330552, D360142, B400218, M430072, T430323, E430335 R430567, E430808, B430856,
D431247, M431268, R450192, B450365, A450592, N470455, P470943, M471012, R480112,
D480156, M480371, N480372 B480376, H490772, B510017, A520083, M530051, E550110,
K550233, B560145, T570021, M580160, A580392, B580393, A590189, B610053, D630077
E630122, A630507, T630558, P630568, N631037, N640172, T640855, K640882, E640907,
K640960, A650001, K650075, A650166, A650210, R650429 B650718, P650915, M651284,
P651355, E651395, N660076, P660296, E660532, D660599, P660604, E660625, B670018,
K670023, B670377, R670867 B680032, R680254, T680424, R680444, A680692, E681106,
M681183, D681289, M690145, B740096, H780028, P810238, B810351, D810389, E810453
A810517, H811232, P820058, K850014, R860186, D900094.

For Eligibility of Lecturership Only.

R010145, B010225, R010354, M010370, N010390, N020003, H020051, R020081, E020278,
P020280, R020290, B020292, K020293, D020296, E020375 A020384, K020386, P020388,
H030120, D030137, E030142, E030157, A030170, K030191, E030216, P030229, D030308,
A030341, P030345, R030389 P030398, A030546, A030550, H030591, A030852, B030853,
R030866, A030867, B030872, K030873, K030892, N030919, A030926, B030984, B030999
P031034, A050017, P050122, R050318, A050380, N050466, A050488, T050511, T050657,
K050762, D060129, H060184, N090128, R090187, R090191 B090588, M090638, A090840,
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K090916, P090922, B090953 K090954, E090977, B091000, T091050, E091058, N091064,
R091066, N091083, K091092, K091132, A091145, H091152, T100109, N100224, E100256
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H100496, D100498, A100514, D100523, T100527, K100666 E110057, M110062, H110185,
A120080, T120148, D120294, M120296, M120302, K130128, B130184, N130220, E140108,
M140210, E140239, B140287 A140290, K140503, M160226, K160293, M160376, T170107,
T170242, A180026, M180041, T180058, A180079, H180164, E180186, N180266, T180271,
N180325, E180357, P180467, B180479, R180502, D190119, D190119, R190147, R190147,
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M210377, R210477, R210574, B210635, E210834, K220023, P220097, K220101, T220224,
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P230337, T230384, K230432, A230445, K230447, E230455 M230460, K230466, D230469,
N230609, T230614, B230879, A230897, N230934, E230947, K230996, A240022, H240025,
M240029, D240065, K240077 K240081, H240097, D240099, A240115, P240157, H240160,
P240176, M240204, H240272, T240278, M240301, T240356, B240359, E240372, M240373
E240427, M240447, K240501, E240505, R240509, E240581, K240613, A240626, T240643,
T240658 R240682, T240702, D240732, T240770, N240773 B240781, H240783, T240789,
T240793, R240815, D240844, A240888, R240912, M240924, A240932, P241036 P241040,

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H241926, E241929, E241948, A241957, K241963, E242029, H242176, E242183, R242187,
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P300153, A300179, M300331 R300412, K310083, M330002, K330050, E330054, H330066,
N330075, P330086, N330115, P330145, B330254, B330262, T330270, D330277, E330282
K330293, D330302, R330326, R330457, B330594, T330699, N330719, D330769, E330789,
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E370075, H370091, D370152, D370230, R390046, H390073, R390084, B400070, M400154,
K400447, K410155, M410219 A410231, E410334, N410355, P420040, T420045, E420061,
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T830039, B830065, K830066, M850023, M850120, K860081, B870029

SC/ST Candidates (Subjected to Verification of Proof of SC/ST)

For Junior Research Fellowship Award and Eligibility of Lecturership

A010545, K030056, R030680, R050639, A100187, B100232, R140285, H150060, R180477,
D210472, A210482, P220365, R230459, B240192, B240213 R240469, P240478, N240623,
T240639, P242293, A242363, T250288, D280198, B300448, D320121, N370229, N390010,
K390049, T400346, P410313 D431251, N450167, N450186, R450232, H450367, B471148,
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D640015, E640109, D640944, R680176, D681065, P681142, M810380, K811134, H820023

For Eligibility of Lecturership only

B010565, T020120, A020268, E020297, D030405, H040033, B040217, B050041, K050116,
R050170, B050172, D050176, N050183, K050270, B050586 K050608, M050617, A050644,
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T100449, P100478, H100481, E100499, M100506, N100507, T100508, N100511, N100598
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R850104, R850176, M850188, R860093, D880047, M890010 T890027, B900090,

(1) The Commission shall not be responsible for any printing error.

(2) The above result is subject to the fulfilment of eligibility conditions and verification of the records.

Joint Secretary
NET Division
— davp 823 (13) 96

CLASSIFIED ADVERTISEMENTS

SHIVAJI UNIVERSITY, KOLHAPUR

Advertisement No. 6 of 1996

Applications in the prescribed form are invited for the following teaching posts in the University Departments at Kolhapur and Solapur.

Sr. No.	Advt. No.	Department	No. of Posts	Reservation Category or Open	Specialisation
A) Special Recruitment Drive for Backward Class					
PROFESSOR (8 POSTS)					
1.	P-1-6/96	Chemistry	1	SC(1)	Inorganic Chemistry
2.	P-2-6/96	Zoology	1	SC (I)	Cell-Biology/Environmental Biology
3.	P-3-6/96	Statistics	1	(SC) (I)	Statistical Inference
4.	P-4-6/96	Physics	1	SC(V)	Solid State Physics/ Experimental Semi-conductors
5.	P-5-6/96	Mathematics	1	SC(I)	Algebra/Analysis/Mechanics
6.	P-6-6/96	Geography	1	SC (I)	Agricultural Geography
7.	P-7-6/96	Economics	1	SC (I)	Agricultural Economics and Co-operation
8.	P-8-6/96	Marathi	1	SC (IV)	1. Sociology of Literature 2. Literary Criticism 3. Old Marathi Literature
READER (8 POSTS)					
9.	R-1-6/96	Chemistry	1	SC (I)	Physical Chemistry
10.	R-2-6/96	Mathematics	1	SC (I)	Topology/Analysis/Differential Equations/Dynamical Systems/ Computer Algebra
11.	R-3-6/96	Physics (Solapur)	1	SC (I)	Communication Electronics (Preference will be given to High frequency devices)
12.	R-4-6/96	Chemistry (Solapur)	1	SC (I)	Structural Inorganic Chemistry/Organometalic Chemistry/Physical Chemistry
13.	R-5-6/96	Geology (Solapur)	1	SC (I)	i) Groundwater Hydrology ii) Geochemistry iii) Sedimentology iv) Remote Sensing & Structural Geology
14.	R-6-6/96	English	1	SC (II)	Australian Literature/African Literature
15.	R-7-6/96	Sociology	1	SC (I)	Sociology of Environment
16.	R-8-6/96	Economics	1	SC (I)	Environmental Economics
LECTURER (9 POSTS)					
17.	L-1-6/96	Chemistry (Physical)	1	SC (I)	-
18.	L-2-6/96	Chemistry (Physical)	1	ST (I)	-
19.	L-3-6/96	Physics	1	ST (IV)	-
20.	L-4-6/96	Physics	1	VJ (A)(I)	-
21.	L-5-6/96	Mathematics	1	SC (I)	-
22.	L-6-6/96	Physics (Solapur)	1	SC (I)	-
23.	L-7-6/96	Geology (Solapur)	1	SC (I)	-
24.	L-8-6/96	Geography	1	ST (I)	-
25.	L-9-6/96	English	1	ST (I)	-
B) GENERAL RECRUITMENT					
PROFESSOR (5 POSTS)					
26.	P-9-6/96	Statistics	1	OPEN	Mathematical Statistics
27.	P-10-6/96	Economics	1	OPEN	Public Finance/Macroeconomics
28.	P-11-6/96	Marathi	1	OPEN	1. Folk-Literature 2. Modern Marathi Literature
29.	P-12-6/96	Library & Information Science	1	OPEN	-
30.	P-13-6/96	Computer Science	1	OPEN	-
DIRECTOR (1 POST)					
31.	D-1-6/96	Adult & Continuing Education and Extension Work	1	OPEN	-

LIBRARIAN (1 POST)					
32.	Lib-1-6/96	Barr. Balasaheb Khardekar Library	1	OPEN	-
READER (5 POSTS)					
33.	R-9-6/96	Chemistry	1	OPEN	Organic Chemistry
34.	R-10-6/96	Geography	1	OPEN	-
35.	R-11-6/96	Geography	1	SC (I)	Remote Sensing
36.	R-12-6/96	Computer Sc.	1	OPEN	-
37.	R-13-6/96	Journalism and Communication Science	1	OPEN	-
DY. LIBRARIAN (1 POST)					
38.	D. Lib-1-6/96	Barr. Balasaheb Khardekar Library	1	OPEN	-
LECTURER (14 POSTS)					
39.	L-10-6/96	Physics	1	OPEN	-
40.	L-11-6/96	Statistics	1	OPEN	-
41.	L-12-6/96	Physics (Electronics) (Solapur)	1	OPEN	-
42	L-13-6/96	Physics (Electronics) (Solapur)	1	SC (I)	-
43	L-14-6/96	Chemistry (Polymer) (Solapur)	1	OPEN	-
44.	L-15-6/96	Chemistry (Solapur)	1	SC (I)	-
45.	L-16-6/96	Chemistry (Organic) (Solapur)	1	OPEN	-
46	L-17-6/96	Geology (Solapur)	1	OPEN	-
47.	L-18-6/96	Marathi	1	OPEN	-
48	L-19-6/96	Marathi	1	SC (I)	-
49.	L-20-6/96	Education	1	OPEN	-
50.	L-21-6/96	Education	1	SC (I)	-
51.	L-22-6/96	Sociology	1	OPEN	-
52.	L-23-6/96	Sociology	1	OPEN	-
ASSISTANT LIBRARIAN (2 POSTS)					
53	A-Lib-1-6/96	Library (Solapur)	1	OPEN	-
54	A-Lib-2-6/96	Barr. Balasaheb Khardekar Library	1	SC (I)	-

NOTE :

i) Roman figures shown against reserved posts in the brackets indicate times of advertisement

ii) If candidates from particular reserved category are not available, other candidates will be appointed for a period of one academic year only and the candidates so appointed will have no right or claim on the said post if candidates from reserved category are available next year.

iii) Post at Sr. No 27 P-10-6/96 is in lien period upto 26-9-1999.

iv) Post at Sr. No. 33 R-9-6/96 is in lien period upto 8-3-97

v) Post at Sr. No. 40 L-11-6/96 is in lien period upto 12-6-1997.

vi) Post at Sr. No. 52 L-23-6/96 is in lien period upto 1-8-1997.

vii) Candidates belonging to reserved categories domiciled out of Maharashtra State will be treated as OPEN.

INSTRUCTIONS :

1. Candidates who wish to be considered for more than one posts, must make separate application for each of the posts.
2. One who is already employed must submit his/her application through proper channel.
3. Applications received after the last date fixed for the receipt of the applications will not be considered.
4. Incomplete application and application on plain paper or xeroxed copies of prescribed application forms will not be considered.
5. The University will not be responsible for postal delay, if any.
6. DETAILS OF PAY SCALES AND QUALIFICATIONS FOR THE POSTS MENTIONED IN THE ADVERTISEMENT WILL BE SUPPLIED SEPARATELY ALONGWITH THE PRESCRIBED APPLICATION FORMS AND THE SAME WILL BE AVAILABLE IN THE UNIVERSITY OFFICE FOR PERSUAL.
7. The candidates should indicate the serial number and advertisement No. of the post mentioned in the advertisement in the application form, to which they apply.

Prescribed application forms (a set of 10 copies) can be had from the University office on payment of Rs. 100/- in cash and by post on sending a Demand Draft of Rs. 105/- drawn in favour of the Finance and Accounts Officer, Shivaji University, Kolhapur payable at Kolhapur Branch.

The application alongwith enclosures duly attached to each copy of the application should be sent to the Registrar, Shivaji University, Vidyanagar, Kolhapur - 416 004 so as to reach him on or before 10th January, 1997.

Kolhapur **Dr. B.P. Sabale**
Date : 4-12-1996 **REGISTRAR**

GRADUATE SCHOOL OF BUSINESS & ADMINISTRATION (GSBA)

R-12/8 Raj Nagar, Opp. ALT Centre,
P.B. No. 5 Ghaziabad - 201 001, U.P., India.

ADMISSION NOTICE

The Institute invites applications from Graduates or those candidates who are likely to complete their Graduation by the end of June 30, 1997 for the following **Post-Graduate Programmes in Management** to begin from July, 1997.

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The Candidates should apply to the **Dean, Graduate School of Business & Administration**, R-12/8 Raj Nagar, Opp. ALT Centre, P.B. No. 5, Ghaziabad-201 001, by sending a bank draft of **Rs. 400.00** in favour of Graduate School of Business & Administration, payable at Ghaziabad. The candidates will appear in the **MAT Examination** to be conducted on **19th January, 1997**. The last date is **30th December, 1996**. They should also apply separately to **AIMA-CME**,Management House, 14, Institutional Area, Lodi Road, New Delhi-110003 for MAT Examination to be held on 19th January, 1997, by sending a bank draft of Rs. 325.00 in favour of **AIMA-CME, Payable at New Delhi.**

Note : There are 60 (Sixty) seats and candidates are to be selected through **MAT Written Examinations, Group Discussion and Personal Interview** conducted by AIMA-CME on different dates to be announced by **MAT** Test Agency.

(DR. L. A. KHAN)
DEAN

(DR. P.L.MAGGU)
EXECUTIVE DIRECTOR

SYMBIOSIS CENTRE FOR MANAGEMENT AND HUMAN RESOURCE DEVELOPMENT(SCMHRD)

New Management Building, Gokhale Cross Road, Model Colony P.O., Pune - 411 016.

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Eligibility :- a) Any graduate from a recognised university with minimum 50% aggregate (Those appearing for the final year exam can also apply)
b) Truthfulness, determination to be excellent and extra-ordinary and a tenacity to master the art by hard work and constant learning

Placement :- For those who dedicatedly avail of the opportunities at SCMHRD, it just happens...90 Corporate recruiters for the last batch of 54 students.

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Detailed Prospectus and Application Forms available from 1st December '96. to 15th January '97. Last date for receipt of completed applications at the above address : 23rd January, 1997. All transactions Tuesday to Sunday (Monday closed)

For Prospectus and Application Form send A/C payee DD for Rs.450/- in favour of " Director, Symbiosis Centre for Management and HRD " payable at Pune or Cash at the counter, alongwith four self addressed (with Pin Code) adhesive stickers of 10 x 5 Cms. Write in pencil your full name and address on the reverse of the D.D. as well. Course Commences on 1st July 1997 and ends with Convocation on 20/4/1999.

PROF. M.S. PILLAI
Director

(All disputes subject to the legal jurisdiction of Pune city only) Tel. : 0212-352374, 372068. Telefax : 0212-351245

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